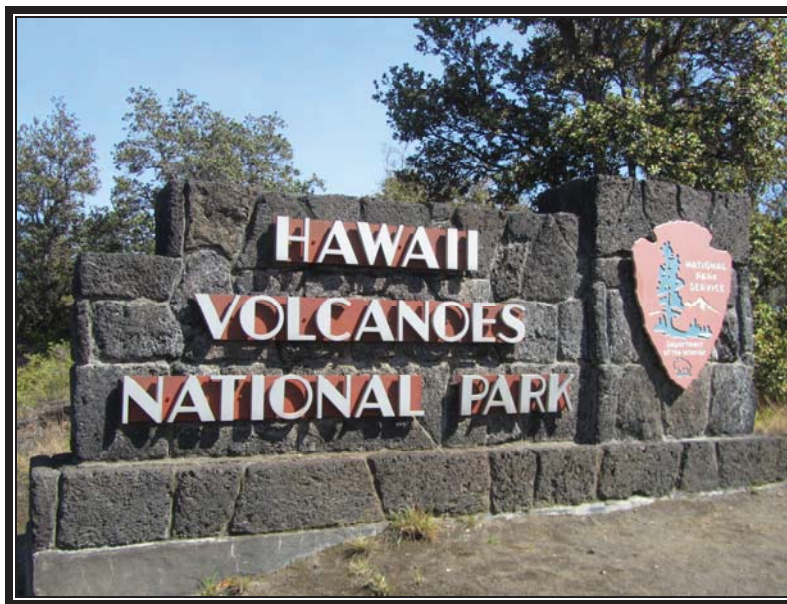




Federal Lands Highway Road Inventory Program

Road Inventory and Condition Assessment

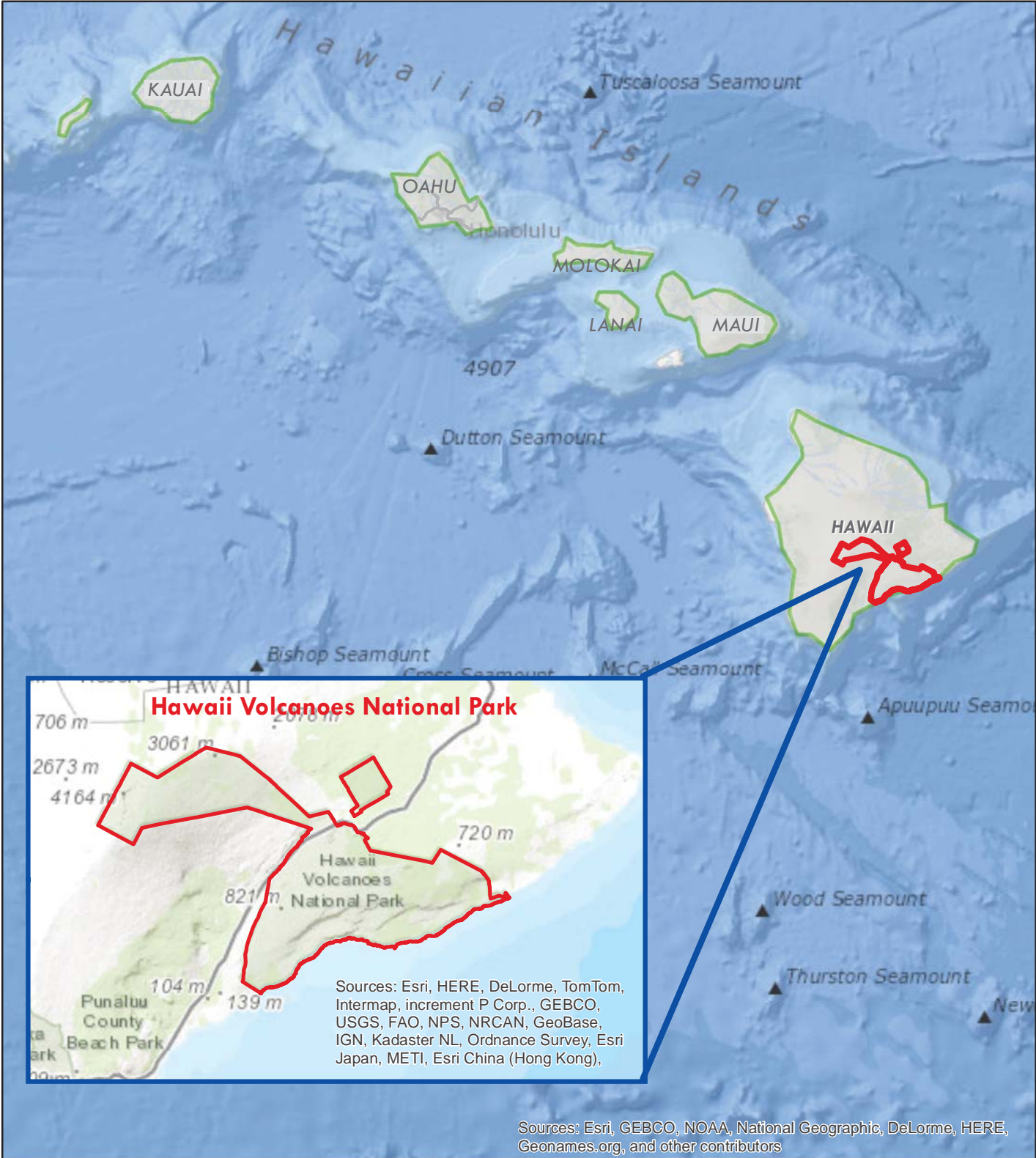


Hawaii Volcanoes National Park
HAVO

Cycle 5 Report

Prepared By: Federal Highway Administration
Road Inventory Program (RIP)
Data Collected: 04/2014
Report Date: 11/2014

Hawaii Volcanoes National Park in Hawaii





DCV = Data Collection Vehicle

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Section 1 Introduction



Hawaii Volcanoes National Park



Federal Lands Highway
Road Inventory Program

INTRODUCTION

The Federal Highway Administration, (FHWA), in the mid 1970s, was charged with the task of identifying surface condition deficiencies and corrective priorities on National Park Service (NPS) roads and parkways. Additionally, FHWA was tasked with establishing an integrated maintenance features inventory, locating features such as culverts, guardrails, and signs, among others, along NPS roads and parkways. As a result, in 1976 the NPS and FHWA entered into an MOA (Memorandum Of Agreement) which established the RIP (Road Inventory Program). This MOA was terminated and revised in 1980 to establish a new MOA aiming to update RIP data and develop a long-range program to improve and maintain NPS roads to designated condition standards and establish a maintenance management program.

The FHWA completed this initial phase of the RIP in the early 1980s. As a result of this effort, each NPS site included in the study received a RIP Report known as the “Brown Book” which included the information collected during this first RIP phase.

In the 1990s, the effort was again renewed to update and maintain the RIP data. By this time the computer age was upon us and a process was employed that relied heavily on electronic data collection and computer technology. A cyclical program was developed and the RIP completed two cycles of data collection from 1994 to 2001. Cycle 1, starting in 1994, was conducted in 44 “large parks” (parks containing 10 or more paved route miles). Cycle 2 began in 1997 and comprised 79 large parks and 5 small parks totaling 4,874 paved route miles. Each of these parks received a RIP Report known as the “Blue Book”. Cycle 3, from 2001 to 2004, was conducted in all parks, large and small, that contained any paved routes, including parking areas and, again, each park received a RIP Report and associated electronic files.

Cycle 4 was initiated in the spring of 2006 covering 86 large parks and several associated small parks consisting of 5,553 paved route miles and 6,232 paved parking areas. Data collection has been completed for Cycle 4 and all data has been delivered to the NPS.

In 2005, the FHWA began implementing the use of a Pavement Management System (PMS) to assist the NPS in prioritizing Pavement Maintenance and Rehabilitation activities. The PMS used by FHWA is the Highway Pavement Management Application (HPMA) and this software has the ability to store inventory and condition data from RIP and forecast future performance using prediction models. Outputs include performance and condition reports at the National, Regional, Park, or Route level. A regional prioritized list and optimization have been produced for most regions and the Federal Highway Deferred Maintenance is calculated via the HPMA.

In an effort to improve the accuracy of treatment recommendations and pavement condition descriptions, an extensive study was completed throughout 2010 that has resulted in changes to the RIP condition reporting method, specifically the distresses and indexes that comprise the Pavement Condition Rating (PCR). It was determined that a better representation of PCR could

be achieved by modifying the relative impact certain distresses would have on the overall rating. The changes that were implemented were endorsed by management at both the FHWA and NPS in October 2010. These changes will allow greater use of RIP and HPMA data for not simply condition data reporting, but also as a reliable tool for project identification and selection. Because of these changes, the PCR Condition ratings reported in Cycle 5 do not directly relate to the condition ratings reported in previous cycle RIP Reports. For more detailed information about the changes, see Section 3 and Section 10 in this RIP Report.

Cycle 5 has launched in the summer of 2010 and will again comprise all parks, large and small, that are served by paved roads and/or parking areas. For Cycle 5, the decision was made to collect condition data in large parks on Functional Class 1, 2, and 7 paved routes only, as well as any new routes that were previously not collected. In small parks, all paved routes and parking areas will be collected. As a result, this will include 81 large parks with 4,459 paved route miles and 231 small parks with 529 paved route miles and associated paved parking areas.

Since 1984, the Road Inventory Program has been funded through the Federal Lands Highway Park Roads and Parkways (PRP) Program. Currently, coordination of the RIP with FLH is under the NPS Washington Headquarters Park Facility Management Division. The FLH Washington office coordinates policy and prepares national reports and needs assessment studies for Congress.

In 1998, the Transportation Equity Act for the 21st Century (TEA-21) amended Title 23 U.S.C., and inserted Section 204(a)(6) requiring the FHWA and NPS, to develop by rule, a Pavement Management System (PMS) applied to park roads and parkways serving the National Park System.

FLH is responsible for the accuracy of all data presented in this report. Any questions or comments concerning the contents of this report should be directed to the national RIP Coordinator located in Sterling, Virginia.

Respectfully,

FHWA RIP Team

FHWA/Eastern Federal Lands
21400 Ridgetop Circle
Sterling, VA 20166
(703) 404-6371

FHWA/Central Federal Lands
12300 West Dakota Ave
Lakewood, CO 80228
(720) 963-3556

Section 2 Park Route Inventory



Hawaii Volcanoes National Park



Federal Lands Highway
Road Inventory Program

Cycle 5 NPS/RIP Route ID Report

Road Inventory Program 11/17/2014

(Numerical By Route #)

Page 1 of 10

Shading Color Key:

Red text denotes approx. mileage

White = Paved Routes, DCV Driven

Yellow = Unpaved Routes, DCV not Driven

Blue = All Paved Parking Areas

Green = All Unpaved Parking Areas

Grey = Paved Routes, DCV not Driven

Black = State, Local or Private non-NPS Routes

= Concession Route Flag ON

*Unpaved route data was obtained from NPS and was not inventoried by the Road Inventory Program (RIP).

** DCV - Data Collection Vehicle

NC - Not Collected

HAVO

HAWAII VOLCANOES NATIONAL PARK

| Rte. No. | Cycle Collected | FMSS No. | Concess Route | Route Name | Route Description From To | Maint. District | Paved Miles | Un-Paved Miles | Total Route Length | Func. Class | Manual Rated SQ/FT | Surf. Type | Area Maps |
|----------|-----------------|----------|---------------|--|--|-----------------|-------------|----------------|--------------------|-------------|--------------------|------------|-----------|
| 0010 | 5 | 22286 | | CRATER RIM DRIVE | FROM ROUTE 5011 (HAWAII STATE ROUTE 11 (HAWAII BELT ROAD / MAMALAHOA HIGHWAY)) AT MP 0.89 ON LEFT TO END OF LOOP | KILAUEA | 10.60 | 0.00 | 10.60 | 1 | | AS | 1,1A,1B |
| 0012 | 5 | 22294 | | CHAIN OF CRATERS ROAD | FROM ROUTE 0010 (CRATER RIM DRIVE) AT MP 7.56 ON RIGHT TO ROUTE 0927 (ERUPTION SITE TURN-AROUND PARKING) | KILAUEA | 18.56 | 0.00 | 18.56 | 1 | | AS | 1,2,3 |
| 0013 | 5 | 22353 | | OFFICE AREA STREET | FROM ROUTE 0010 (CRATER RIM DRIVE) AT MP 0.26 ON RIGHT TO ROUTE 0901 (KILAUEA VISITORS CENTER ADMINISTRATIVE PARKING) | KILAUEA | 0.05 | 0.00 | 0.05 | 3 | | AS | 1,1A |
| 0100A | 5 | 22598 | | MAUNA LOA ROAD | FROM ROUTE 5011 (HAWAII STATE ROUTE 11 (HAWAII BELT ROAD / MAMALAHOA HIGHWAY)) TO ROUTE 0923 (KIPUKA PUAULU TRAILHEAD PARKING) | KILAUEA | 1.49 | 0.00 | 1.49 | 1 | | AS | 1 |
| 0100B | 5 | 21954 | | MAUNA LOA LOOKOUT ROAD | FROM ROUTE 0923 (KIPUKA PUAULU TRAILHEAD PARKING) TO ROUTE 0944 (MAUNA LOA LOOKOUT UNPAVED PARKING) | KILAUEA | 9.81 | 0.00 | 9.81 | 2 | | AS | 1,4 |
| 0101 | 5 | 33601 | | HILINA PALI ROAD | FROM ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 2.21 ON RIGHT TO ROUTE 0940 (HILINA PALI HANDICAP OVERLOOK PARKING) | KILAUEA | 8.50 | 0.00 | 8.50 | 2 | | AS | 2 |
| 0201 | 5 | 42503 | | KILAUEA OVERLOOK ROAD | FROM ROUTE 0010 (CRATER RIM DRIVE) AT MP 2.38 ON LEFT TO ROUTE 0910ZZ (KILAUEA OVERLOOK AND PICNIC AREA PARKING AREAS) | KILAUEA | 0.20 | 0.00 | 0.20 | 2 | | AS | 1 |
| 0204A | 5 | 21531 | | NAMAKANI PAIO CAMPGROUND ROAD | FROM ROUTE 5011 (HAWAII STATE ROUTE 11 (HAWAII BELT ROAD / MAMALAHOA HIGHWAY)) AT MP 3.90 ON RIGHT TO END OF LOOP | KILAUEA | 0.32 | 0.00 | 0.32 | 3 | | AS | 1 |
| 0204B | 5 | 21540 | ■ | NAMAKANI PAIO RENTAL CABIN ACCESS ROAD | FROM ROUTE 0204A (NAMAKANI PAIO CAMPGROUND ROAD) AT MP 0.05 ON RIGHT THROUGH RENTAL CABINS AREA | KILAUEA | 0.00 | 0.00 | 0.00 | 3 | 13,795 | AS | 1 |

Cycle 5 NPS/RIP Route ID Report

Road Inventory Program 11/17/2014

(Numerical By Route #)

Page 2 of 10

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** DCV - Data Collection Vehicle

NC - Not Collected

HAVO

HAWAII VOLCANOES NATIONAL PARK

| Rte. No. | Cycle Collected | FMSS No. | Concess Route | Route Name | Route Description From | To | Maint. District | Paved Miles | Un-Paved Miles | Total Route Length | Func. Class | Manual Rated SQ/FT | Surf. Type | Area Maps |
|----------|-----------------|----------|---------------|-----------------------------|--|---|-----------------|-------------|----------------|--------------------|-------------|--------------------|------------|-----------|
| 0205 | 5 | 22600 | | TREE MOLDS ROAD | FROM ROUTE 0100A (MAUNA LOA ROAD) AT MP 0.17 ON RIGHT | TO END OF LOOP | KILAUEA | 0.56 | 0.00 | 0.56 | 2 | | AS | 1 |
| 0208 | 5 | 42507 | | MAUNA ULU ACCESS ROAD | FROM ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 3.66 ON LEFT | TO END OF LOOP | KILAUEA | 0.54 | 0.00 | 0.54 | 2 | | AS | 3 |
| 0209 | 5 | 42508 | | PUU PUII OVERLOOK ROAD | FROM ROUTE 0010 (CRATER RIM DRIVE) AT MP 7.86 ON LEFT | TO ROUTE 0914 (PUU PUII PARKING) | KILAUEA | 0.20 | 0.00 | 0.20 | 2 | | AS | 1 |
| 0211 | 5 | 42510 | | STEAM VENTS ROAD | FROM ROUTE 0010 (CRATER RIM DRIVE) AT MP 1.06 ON LEFT | TO ROUTE 0010 (CRATER RIM DRIVE) AT MP 0.95 ON LEFT | KILAUEA | 0.12 | 0.00 | 0.12 | 2 | | AS | 1 |
| 0213 | 5 | 88336 | | KAHUKU ROAD | FROM HAWAII STATE ROUTE 11 (HAWAII BELT ROAD / MAMALAHOA HIGHWAY) | TO ROUTE 0934 (KAHUKU ADMINISTRATIVE PARKING) | KAHUKU | 0.56 | 18.00 | 18.56 | 2 | 51,668 | AS | 5 |
| 0214 | 5 | 113874 | | KILAUEA MILITARY CAMP ROAD | FROM ROUTE 0010 (CRATER RIM DRIVE) AT MP 1.49 ON RIGHT | TO ROUTE 5011 (HAWAII STATE ROUTE 11 (HAWAII BELT ROAD / MAMALAHOA HIGHWAY)) AT MP 2.59 ON LEFT | KILAUEA | 0.20 | 0.00 | 0.20 | 3 | | AS | 1,1B |
| 0215ZZ | 5 | 239127 | | KILAUEA MILITARY CAMP ROADS | FROM ROUTE 0010 (CRATER RIM DRIVE) AND 0214 (KILAUEA MILITARY CAMP ROAD) | THROUGH KILAUEA MILITARY CAMP | KILAUEA | 1.63 | 0.00 | 1.63 | 3 | | AS | 1,1B |
| 0400 | 5 | 103274 | | WATER TANK ROAD | FROM ROUTE 0010 (CRATER RIM DRIVE) AT MP 0.35 ON RIGHT | TO ROUTE 5011 (HAWAII STATE ROUTE 11 (HAWAII BELT ROAD / MAMALAHOA HIGHWAY)) AT MP 1.37 ON LEFT | KILAUEA | 0.34 | 0.00 | 0.34 | 6 | | AS | 1,1A |
| 0401 | 5 | 42514 | | NORTH RESIDENCE ROAD | FROM ROUTE 0010 (CRATER RIM DRIVE) AT MP 0.26 ON LEFT | TO ROUTE 0010 (CRATER RIM DRIVE) AT MP 10.48 ON LEFT | KILAUEA | 0.43 | 0.00 | 0.43 | 5 | | AS | 1,1A |
| 0403 | 5 | 42516 | | SOUTH RESIDENCE LOOP | FROM ROUTE 0401 (NORTH RESIDENCE ROAD) | TO END OF LOOP | KILAUEA | 0.42 | 0.00 | 0.42 | 5 | | AS | 1,1A |

Cycle 5 NPS/RIP Route ID Report

Road Inventory Program 11/17/2014

(Numerical By Route #)

Page 3 of 10

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NC - Not Collected

HAVO

HAWAII VOLCANOES NATIONAL PARK

| Rte. No. | Cycle Collected | FMSS No. | Concess Route | Route Name | Route Description From To | Maint. District | Paved Miles | Un-Paved Miles | Total Route Length | Func. Class | Manual Rated SQ/FT | Surf. Type | Area Maps |
|----------|-----------------|----------|---------------|-----------------------------------|---|-----------------|-------------|----------------|--------------------|-------------|--------------------|------------|-----------|
| 0404 | 5 | 22601 | | TREE MOLDS STABLE ROAD | FROM ROUTE 0205 (TREE MOLDS ROAD) AT MP 0.12 ON LEFT TO END OF LOOP | KILAUEA | 0.23 | 0.11 | 0.34 | 5 | 11,986 | AS | 1 |
| 0405 | 5 | 23431 | | AINAHOU ROAD | FROM ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 4.30 ON RIGHT TO TRAILHEAD AT RANCH HOUSE AT MP 2.06 | KILAUEA | 0.06 | 2.00 | 2.06 | 5 | | AS | 3 |
| 0406 | NC | 42647 | | AINAHOU RANCH SPUR | FROM ROUTE 0405 (AINAHOU ROAD) TO RANCH HOUSE | KILAUEA | 0.00 | 0.40 | 0.40 | 4 | | GR | |
| 0408 | NC | 42648 | | EMERGENCY ESCAPE ROAD | FROM ROUTE 0208 (MAUNA ULU ACCESS ROAD) AT MP 0.13 ON LEFT TO ROUTE 0010 (CRATER RIM DRIVE) AT MP 9.00 ON RIGHT | KILAUEA | 0.00 | 4.60 | 4.60 | 6 | | GR | |
| 0409 | 5 | 22347 | | RESOURCE MANAGEMENT ROAD | FROM ROUTE 0010 (CRATER RIM DRIVE) AT MP 10.10 ON LEFT TO ROUTE 0917 (RESOURCE MANAGEMENT AREA PARKING) | KILAUEA | 0.47 | 0.00 | 0.47 | 3 | | AS | 1,1A |
| 0411 | NC | 21966 | | MAUNA LOA SPUR ROAD-FIRE BREAKS | FROM ROUTE 0100B (MAUNA LOA LOOKOUT ROAD) AT MP 4.35 ON LEFT TO END | KILAUEA | 0.00 | 0.75 | 0.75 | 6 | | GR | |
| 0412 | NC | 21967 | | MAUNA LOA POWERLINE ROAD, UNPAVED | FROM ROUTE 0100B (MAUNA LOA LOOKOUT ROAD) AT MP 4.35 ON RIGHT TO END | KILAUEA | 0.00 | 5.00 | 5.00 | 6 | | GR | |
| 0413 | NC | 22602 | | MAUNA LOA FIRE BREAK ROADS | FROM ROUTE 0404 (TREE MOLDS STABLE ROAD) TO END | KILAUEA | 0.00 | 0.90 | 0.90 | 6 | | GR | |
| 0414 | NC | 33610 | | HILINA PALI FUEL BREAK ROAD | FROM ROUTE 0101 (HILINA PALI ROAD) TO ROUTE 0012 (CHAIN OF CRATERS ROAD) | KILAUEA | 0.00 | 5.50 | 5.50 | 6 | | GR | |
| 0415 | NC | 22874 | | MAUNA LOA QUARRY ROAD | FROM ROUTE 0100B (MAUNA LOA LOOKOUT ROAD) AT MP 0.072 ON LEFT TO MAUNA LOA QUARRY | KILAUEA | 0.00 | 0.35 | 0.35 | 6 | | GR | |
| 0416ZZ | 5 | 21519 | | KILAUEA WATER TANKS AREA ROADS | FROM GRAVEL PILE THOUGH WATER TANK AREA | KILAUEA | 0.69 | 0.00 | 0.69 | 6 | 50,733 | AS | 1,1A |

Cycle 5 NPS/RIP Route ID Report

Road Inventory Program 11/17/2014

(Numerical By Route #)

Page 5 of 10

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HAVO

HAWAII VOLCANOES NATIONAL PARK

| Rte. No. | Cycle Collected | FMSS No. | Concess Route | Route Name | Route Description From To | Maint. District | Paved Miles | Un-Paved Miles | Total Route Length | Func. Class | Manual Rated SQ/FT | Surf. Type | Area Maps |
|----------|-----------------|----------|---------------|--|---|-----------------|-------------|----------------|--------------------|-------------|--------------------|------------|-----------|
| 0908D | 5 | | | VISITORS EMERGENCY OPERATIONS CENTER PARKING | FROM ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.386 ON RIGHT TO PARKING | KILAUEA | 0.00 | 0.00 | 0.00 | | 9,258 | AS | 1,1A |
| 0908ZZ | 5 | 22831 | | KILAUEA MAINTENANCE YARD PARKING AREAS | FROM ROUTE 0401 (NORTH RESIDENCE ROAD) ON LEFT AND RIGHT TO PARKING | KILAUEA | 0.00 | 0.00 | 0.00 | | 41,352 | AS | 1,1A |
| 0909ZZ | 5 | 22292 | | STEAM VENTS PARKING AREAS | ADJACENT TO ROUTE 0211 (STEAM VENTS ROAD) ON RIGHT AND LEFT TO PARKING | KILAUEA | 0.00 | 0.00 | 0.00 | | 6,051 | AS | 1 |
| 0910ZZ | 5 | 22245 | | KILAUEA OVERLOOK AND PICNIC AREA PARKING AREAS | FROM ROUTE 0201 (KILAUEA OVERLOOK ROAD) TO PARKING | KILAUEA | 0.00 | 0.00 | 0.00 | | 24,620 | AS | 1 |
| 0911 | 5 | 22266 | | VOLCANO OBSERVATORY PARKING | FROM ROUTE 0010 (CRATER RIM DRIVE) AT MP 2.78 ON LEFT TO ROUTE 0010 (CRATER RIM DRIVE) AT MP 2.83 ON LEFT | KILAUEA | 0.00 | 0.00 | 0.00 | | 47,247 | AS | 1 |
| 0912 | 3 | 22236 | | HALEMAUMAU OVERLOOK PARKING | FROM ROUTE 0010 (CRATER RIM DRIVE) TO ROUTE 0010 (CRATER RIM DRIVE) | KILAUEA | 0.00 | 0.00 | 0.00 | | 153,465 | AS | 1 |
| 0913 | 5 | 42663 | | DEVASTATION TRAIL PARKING | FROM ROUTE 0010 (CRATER RIM DRIVE) AT MP 7.56 ON LEFT TO PARKING | KILAUEA | 0.00 | 0.00 | 0.00 | | 23,305 | AS | 1 |
| 0914 | 5 | 22302 | | PUU PUAU PARKING | FROM END OF ROUTE 0209 (PUU PUAU OVERLOOK ROAD) TO PARKING | KILAUEA | 0.00 | 0.00 | 0.00 | | 21,336 | AS | 1 |
| 0915ZZ | 5 | 42665 | | THURSTON LAVA TUBE PARKING AREAS | ADJACENT TO ROUTE 0010 (CRATER RIM DRIVE) ON LEFT AND RIGHT TO PARKING | KILAUEA | 0.00 | 0.00 | 0.00 | | 16,579 | AS | 1 |
| 0916 | 5 | 42666 | | KILAUEA IKI PARKING | FROM ROUTE 0010 (CRATER RIM DRIVE) AT MP 9.31 ON LEFT TO ROUTE 0010 (CRATER RIM DRIVE) AT MP 9.38 ON LEFT | KILAUEA | 0.00 | 0.00 | 0.00 | | 24,402 | AS | 1,1A |
| 0917 | 5 | 42667 | | RESOURCE MANAGEMENT AREA PARKING | FROM END OF ROUTE 0409 (RESOURCE MANAGEMENT ROAD) TO PARKING | KILAUEA | 0.00 | 0.00 | 0.00 | | 43,025 | AS | 1,1A |
| 0918 | 5 | 23394 | | PUHIMAU CRATER PARKING | FROM ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 0.97 ON LEFT TO ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 1.01 ON LEFT | KILAUEA | 0.00 | 0.00 | 0.00 | | 13,441 | AS | 1 |

Cycle 5 NPS/RIP Route ID Report

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** DCV - Data Collection Vehicle NC - Not Collected

CYCLE 5 SUMMARY TOTALS FOR HAWAII VOLCANOES NATIONAL PARK

CYCLE 5 ROUTE TOTALS

| | |
|--|--------------|
| DCV Driven Route Miles | 54.48 |
| Manually Rated Route Miles | 1.60 |
| TOTAL PARK ROUTE MILES COLLECTED IN CYCLE 5 | 56.08 |
| Manually Rated Routes (SQFT) | 30,014 |
| TOTAL UNPAVED PARK ROUTE MILES | 37.96 |

CYCLE 5 CONCESSION TOTALS

| | |
|---|---------------|
| Concession Paved Route Miles | 0.00 |
| Concession Unpaved Route Miles | 0.00 |
| TOTAL CONCESSION ROUTE MILES | 0.00 |
| Concession Paved Parking Area SQFT | 25,868 |
| Concession Unpaved Parking Area SQFT | 0 |
| TOTAL CONCESSION PARKING AREA SQFT | 25,868 |
| Concession Manually Rated Routes SQFT | 13,795 |

* CYCLE 5 PARKING AREA TOTALS

| | |
|-----------------------------|----------------|
| Paved Parking (SQFT) | 793,066 |
| Unpaved Parking (SQFT) | 40,455 |
| TOTAL PARKING (SQFT) | 833,521 |

CYCLE 5 WEIGHTED AVERAGE PARK VALUES

| | |
|---------------------------------------|---------------|
| DCV Driven PCR | 86 |
| **Manually Rated Routes PCR | 58 |
| **Parking PCR | 79 |
| ***Total Equivalent Lane Miles | 107.54 |

* - The Parking Area Totals SQFT value represents all parking areas collected in Cycle 5, both park and concessionaire.

** - Parking and Manually Rated Routes are assigned the following PCR values based on their observed condition: Construction=-1, Excellent=97, Good=90, Fair=73, and Poor=45.

*** - Equivalent Lane Miles are calculated by route using the following equations : DCV and Manually Rated Lines Routes=(PAVE_WIDTHxPAVED_MI)/11 foot lane. Parking Areas=SQ_FEET/5280/11. Manually Rated Polygons=SQ_FEET/5280/11.

NOTE: The 54.48 Miles listed as DCV Driven Route Miles includes the 4.706 Mile portion of Route 0010 that was inaccessible due to hazardous volcanic gas conditions.

Cycle 5 NPS/RIP Route ID Report

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General Park Road Functional Classification Table

- Class 1** Principal Park Road/Rural Parkway (Public Roads) Roads which constitute the main access route, circulatory tour, or thoroughfare for park visitors. Route Numbers 1 - 99. Note: Rural parkways (e.g. Natchez Trace) are numbered 1 - 9. State Routes Inventoried for Park. Route Numbers 5000-5999
- Class 2** Connector Park Road (Public Roads) - Roads which provide access within a park to areas of scenic, scientific, recreational or cultural interest, such as overlooks, campgrounds, etc. Route Numbers 100-199.
- Class 3** Special Purpose Park Road (Public Roads) - Roads which provide circulation within public areas, such as campgrounds, picnic areas, visitor center complexes, concessionaire facilities, etc. These roads generally serve low-speed traffic and are often designed for one-way circulation. Route Numbers 200-299.
- Class 4** Primitive Park Roads (Public Roads) - Roads which provide circulation through remote areas and/or access to primitive campgrounds and undeveloped areas. These roads frequently have no minimum design standards and their use may be limited to specially equipped vehicles. Route Numbers 200-299. Note: Functional Classes 3 and 4 have the same route numbers because, historically, they were numbered similarly.
- Class 5** Administrative Access Road (Administrative Roads) - All public roads intended for access to administrative developments or structures such as park offices, employee quarters, or utility areas. Route Numbers 400-499.
- Class 6** Restricted Road (Administrative Roads) - All roads normally closed to the public, including patrol roads, truck trails, and other similar roads. Route Numbers 400-499. Note: Functional Classes 5 and 6 have the same route numbers because historically they were numbered similarly and often there is little distinction between these routes. For example, because utility areas and employee housing are often closed to the public, this restriction would result in classification of FC 6 rather than FC 5.
- Class 7** Urban Parkway (Urban Parkways and City Streets) - These facilities serve high volumes of park and non-park related traffic and are restricted, limited-access facilities in an urban area. This category of roads primarily encompasses the major parkways which serve as gateways to our nation's capital. Other major park roads or portions thereof, however, may be included in this category. Route Numbers 1-9.
- Class 8** City Streets (Urban Parkways and City Streets) - City streets are usually extensions of the adjoining street system that are owned and maintained by the National Park Service. The construction and/or reconstruction should conform with accepted local engineering practice and local conditions. Route Numbers 600-699.

A park road system contains those roads within or giving access to a park or other unit of the NPS which are administered by the NPS, or by the Service in cooperation with other agencies. The assignment of a functional classification (FC) to a park road is not based on traffic volumes or design speed, but on the intended use or function of that road or route.

The historic route numbering system also included a 300 number series for interpretive roads, and a 500 series for one-way roads. There are approximately 250 roads nationwide which are designated by the 300 and 500 series. The numbers for these roads will be maintained for reporting consistency. However, since these interpretive and one-way routes are not as clearly tied to a specific functional class, the 300 and 500 series will be discontinued for future use.

5000 route numbers are assigned to Non-NPS Routes that are State, County or City owned which border, traverse, or provide access to Park Facilities or Locations. 5000 Routes are driven for GPS and Video Log only.

Surface Type Abbreviations:

- AS - Asphaltic Concrete Pavement**
- CO - Portland Cement Concrete Pavement**
- BR - Brick or Pavers Road Bed**
- CB - Cobble Stone Road Bed**
- GR - Gravel Road Bed**
- SA - Sand Road Bed**
- NV - Native or Dirt Material Road Bed**
- OT - Other Materials Road Bed**

NPS/RIP Subcomponent Details for HAVO

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Shading Color Key:

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Blue = All Paved Parking Areas

■ = Concession Route Flag ON

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HAVO

HAWAII VOLCANOES NATIONAL PARK

| Rte. No. | FMSS No. | Cycle Collected | Route Description | | Concess Route | Func. Class | Paved Miles | Un-Paved Miles | Total Route Length | Manual Rated SQ/FT |
|----------|----------|-----------------|--|--|---------------|-------------|-------------|----------------|--------------------|--------------------|
| | | | Route Name | From | | | | | | |
| 0215ZZ | 239127 | 5 | KILAUEA MILITARY CAMP ROADS | FROM ROUTE 0010 (CRATER RIM DRIVE) AND 0214 (KILAUEA MILITARY CAMP ROAD) | | 3 | 1.63 | 0.00 | 1.63 | |
| 0416ZZ | 21519 | 5 | KILAUEA WATER TANKS AREA ROADS | FROM GRAVEL PILE | | 6 | 0.69 | 0.00 | 0.69 | 50,733 |
| 0419ZZ | 240233 | NC | KILAUEA MILITARY CAMP POWERLINE AND BONEYARD ROADS | FROM ROUTES 0214 (KILAUEA MILITARY CAMP ROAD) AND 0215ZZ (KILAUEA MILITARY CAMP ROADS) | | 6 | 0.00 | 0.15 | 0.15 | |
| 0900ZZ | 22571 | 5 | KILAUEA VISITORS CENTER PARKING AREAS | FROM ROUTE 0013 (OFFICE AREA STREET) AT MP 0.01 (ON RIGHT AND LEFT) | | | 0.00 | 0.00 | 0.00 | 55,078 |
| 0908ZZ | 22831 | 5 | KILAUEA MAINTENANCE YARD PARKING AREAS | FROM ROUTE 0401 (NORTH RESIDENCE ROAD) ON LEFT AND RIGHT | | | 0.00 | 0.00 | 0.00 | 41,352 |
| 0909ZZ | 22292 | 5 | STEAM VENTS PARKING AREAS | ADJACENT TO ROUTE 0211 (STEAM VENTS ROAD) ON RIGHT AND LEFT | | | 0.00 | 0.00 | 0.00 | 6,051 |
| 0910ZZ | 22245 | 5 | KILAUEA OVERLOOK AND PICNIC AREA PARKING AREAS | FROM ROUTE 0201 (KILAUEA OVERLOOK ROAD) | | | 0.00 | 0.00 | 0.00 | 24,620 |
| 0915ZZ | 42665 | 5 | THURSTON LAVA TUBE PARKING AREAS | ADJACENT TO ROUTE 0010 (CRATER RIM DRIVE) ON LEFT AND RIGHT | | | 0.00 | 0.00 | 0.00 | 16,579 |
| 0931ZZ | 22298 | NC | KEANAKAKOI PARKING AREAS | ADJACENT TO ROUTE 0010 (CRATER RIM DRIVE) (NORTH AND SOUTH) | | | 0.00 | 0.00 | 0.00 | |
| 0937ZZ | 239125 | 5 | KILAUEA MILITARY CAMP PARKING AREAS | FROM ROUTES 0214 (KILAUEA MILITARY CAMP ROAD) AND 0215ZZ (KILAUEA MILITARY CAMP ROADS) | | | 0.00 | 0.00 | 0.00 | 110,773 |
| 0938ZZ | N/A | NC | KILAUEA MILITARY CAMP UNPAVED PARKING AREAS | FROM ROUTE 0214 (KILAUEA MILITARY CAMP ROAD) AND 0215ZZ (KILAUEA MILITARY CAMP ROADS) | | | 0.00 | 0.00 | 0.00 | 10,960 |
| 0945ZZ | 240232 | NC | NAMAKANI PAIO CAMPGROUND UNPAVED PARKING AREAS | ADJACENT TO ROUTE 0204A (NAMAKANI PAIO CAMPGROUND ROAD) ON LEFT AND RIGHT | | | 0.00 | 0.00 | 0.00 | 10,575 |

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HAVO

HAWAII VOLCANOES NATIONAL PARK

HAVO-0215ZZ Subcomponent Breakdown

| Rte. No. | FMSS No. | Cycle Collected | Route Description | | | Concess Route | Func. Class | Paved Miles | Un-Paved Miles | Total Route Length | Manual Rated SQ/FT |
|----------|----------|-----------------|------------------------------|--|---|---------------|-------------|-------------|----------------|--------------------|--------------------|
| | | | Route Name | From | To | | | | | | |
| 0215AZ | 239127 | 5 | KILAUEA MILITARY CAMP ROAD A | FROM ROUTE 0215BZ (KILAUEA MILITARY CAMP ROAD B) | TO ROUTE 0215CZ (KILAUEA MILITARY CAMP ROAD C) | | 3 | 0.04 | 0.00 | 0.04 | |
| 0215BZ | 239127 | 5 | KILAUEA MILITARY CAMP ROAD B | FROM ROUTE 0010 (CRATER RIM DRIVE) | TO ROUTE 0010 (CRATER RIM DRIVE) | | 3 | 0.12 | 0.00 | 0.12 | |
| 0215CZ | 239127 | 5 | KILAUEA MILITARY CAMP ROAD C | FROM ROUTE 0215DZ (KILAUEA MILITARY CAMP ROAD D) | TO ROUTE 0214 (KILAUEA MILITARY CAMP ROAD) | | 3 | 0.20 | 0.00 | 0.20 | |
| 0215DZ | 239127 | 5 | KILAUEA MILITARY CAMP ROAD D | FROM ROUTE 0010 (CRATER RIM DRIVE) | TO ROUTE 0215KZ (KILAUEA MILITARY CAMP ROAD K) | | 3 | 0.33 | 0.00 | 0.33 | |
| 0215EZ | 239127 | 5 | KILAUEA MILITARY CAMP ROAD E | FROM ROUTE 0214 (KILAUEA MILITARY CAMP ROAD) | TO ROUTE 0215FZ (KILAUEA MILITARY CAMP ROAD F) | | 3 | 0.12 | 0.00 | 0.12 | |
| 0215FZ | 239127 | 5 | KILAUEA MILITARY CAMP ROAD F | FROM ROUTE 0215CZ (KILAUEA MILITARY CAMP ROAD C) | TO ROUTES 0215EZ (KILAUEA MILITARY CAMP ROAD E), 0215HZ (KILAUEA MILITARY CAMP ROAD H), AND 0215IZ (KILAUEA MILITARY CAMP ROAD I) | | 3 | 0.00 | 0.00 | 0.00 | 16,219 |
| 0215GZ | 239127 | 5 | KILAUEA MILITARY CAMP ROAD G | FROM ROUTE 0215JZ (KILAUEA MILITARY CAMP ROAD J) | TO ROUTE 0215EZ (KILAUEA MILITARY CAMP ROAD E) | | 3 | 0.09 | 0.00 | 0.09 | |
| 0215HZ | 239127 | 5 | KILAUEA MILITARY CAMP ROAD H | FROM ROUTE 0215DZ (KILAUEA MILITARY CAMP ROAD D) | TO ROUTE 0215FZ (KILAUEA MILITARY CAMP ROAD F) | | 3 | 0.18 | 0.00 | 0.18 | |
| 0215IZ | 239127 | 5 | KILAUEA MILITARY CAMP ROAD I | FROM ROUTE 0215FZ (KILAUEA MILITARY CAMP ROAD F) | TO ROUTE 0215HZ (KILAUEA MILITARY CAMP ROAD H) | | 3 | 0.13 | 0.00 | 0.13 | |
| 0215JZ | 239127 | 5 | KILAUEA MILITARY CAMP ROAD J | FROM ROUTE 0215DZ (KILAUEA MILITARY CAMP ROAD D) | TO ROUTE 0214 (KILAUEA MILITARY CAMP ROAD) | | 3 | 0.18 | 0.00 | 0.18 | |
| 0215KZ | 239127 | 5 | KILAUEA MILITARY CAMP ROAD K | FROM ROUTE 0215JZ (KILAUEA MILITARY CAMP ROAD J) | TO ROUTE 0937KZ (KILAUEA MILITARY CAMP PARKING K) | | 3 | 0.23 | 0.00 | 0.23 | |
| 0215LZ | 239127 | 5 | KILAUEA MILITARY CAMP ROAD L | FROM ROUTE 0215DZ (KILAUEA MILITARY CAMP ROAD D) | TO ROUTE 0215KZ (KILAUEA MILITARY CAMP ROAD K) | | 3 | 0.02 | 0.00 | 0.02 | |

NPS/RIP Subcomponent Details for HAVO

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HAVO

HAWAII VOLCANOES NATIONAL PARK

HAVO-0416ZZ Subcomponent Breakdown

| Rte. No. | FMSS No. | Cycle Collected | Route Description | | Concess Route | Func. Class | Paved Miles | Un-Paved Miles | Total Route Length | Manual Rated SQ/FT | |
|----------|----------|-----------------|---------------------------------|--|--|-------------|-------------|----------------|--------------------|--------------------|--------|
| | | | Route Name | From | | | | | | | To |
| 0416AZ | 21519 | 5 | KILAUEA WATER TANKS AREA ROAD A | FROM GRAVEL PILE | TO END OF LOOP | | 6 | 0.58 | 0.00 | 0.58 | 42,948 |
| 0416BZ | 21519 | 5 | KILAUEA WATER TANKS AREA ROAD B | FROM ROUTE 0416AZ (KILAUEA WATER TANKS AREA ROAD A) ON LEFT | TO ROUTE 0416AZ (KILAUEA WATER TANKS AREA ROAD A) ON LEFT | | 6 | 0.06 | 0.00 | 0.06 | 3,865 |
| 0416CZ | 21519 | 5 | KILAUEA WATER TANKS AREA ROAD C | FROM ROUTE 0416AZ (KILAUEA WATER TANKS AREA ROAD A) ON RIGHT | TO ROUTE 0416AZ (KILAUEA WATER TANKS AREA ROAD A) ON RIGHT | | 6 | 0.05 | 0.00 | 0.05 | 3,920 |

HAVO-0419ZZ Subcomponent Breakdown

| Rte. No. | FMSS No. | Cycle Collected | Route Description | | Concess Route | Func. Class | Paved Miles | Un-Paved Miles | Total Route Length | Manual Rated SQ/FT | |
|----------|----------|-----------------|---|--|---------------|-------------|-------------|----------------|--------------------|--------------------|----|
| | | | Route Name | From | | | | | | | To |
| 0419AZ | 240233 | NC | KILAUEA MILITARY CAMP POWERLINE ACCESS ROAD | FROM ROUTE 0215DZ (KILAUEA MILITARY CAMP ROAD D) | TO POWERLINE | | 6 | 0.00 | 0.06 | 0.06 | |
| 0419BZ | 240233 | NC | KILAUEA MILITARY CAMP BONEYARD ROAD | FROM ROUTE 0214 (KILAUEA MILITARY CAMP ROAD) | TO BONEYARD | | 6 | 0.00 | 0.09 | 0.09 | |

HAVO-0900ZZ Subcomponent Breakdown

| Rte. No. | FMSS No. | Cycle Collected | Route Description | | Concess Route | Func. Class | Paved Miles | Un-Paved Miles | Total Route Length | Manual Rated SQ/FT | |
|----------|----------|-----------------|--|--|---|-------------|-------------|----------------|--------------------|--------------------|--------|
| | | | Route Name | From | | | | | | | To |
| 0900AZ | 22571 | 5 | KILAUEA VISITORS CENTER PARKING AREA A | FROM ROUTE 0013 (OFFICE AREA STREET) AT MP 0.01 ON LEFT | TO ROUTE 0400 (WATER TANK ROAD) AT MP 0.01 ON RIGHT | | | 0.00 | 0.00 | 0.00 | 33,894 |
| 0900BZ | 22571 | 5 | KILAUEA VISITORS CENTER PARKING AREA B | FROM ROUTE 0013 (OFFICE AREA STREET) AT MP 0.01 ON RIGHT | TO PARKING | | | 0.00 | 0.00 | 0.00 | 21,184 |

NPS/RIP Subcomponent Details for HAVO

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HAVO

HAWAII VOLCANOES NATIONAL PARK

HAVO-0908ZZ Subcomponent Breakdown

| Rte. No. | FMSS No. | Cycle Collected | Route Description | | | Concess Route | Func. Class | Paved Miles | Un-Paved Miles | Total Route Length | Manual Rated SQ/FT |
|----------|----------|-----------------|------------------------------------|--|---|---------------|-------------|-------------|----------------|--------------------|--------------------|
| | | | Route Name | From | To | | | | | | |
| 0908AZ | 22831 | 5 | KILAUEA MAINTENANCE YARD PARKING A | FROM ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.303 ON RIGHT | TO ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.324 ON RIGHT | | | 0.00 | 0.00 | 0.00 | 15,381 |
| 0908BZ | 22831 | 5 | KILAUEA MAINTENANCE YARD PARKING B | FROM ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.341 ON RIGHT | TO PARKING | | | 0.00 | 0.00 | 0.00 | 9,439 |
| 0908CZ | 22831 | 5 | KILAUEA MAINTENANCE YARD PARKING C | ADJACENT TO ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.311 ON LEFT | | | | 0.00 | 0.00 | 0.00 | 11,244 |
| 0908EZ | 22831 | 5 | KILAUEA MAINTENANCE YARD PARKING E | FROM ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.354 ON RIGHT | TO PARKING | | | 0.00 | 0.00 | 0.00 | 3,225 |
| 0908FZ | 22831 | 5 | RESIDENCE ROAD PARKING A | ADJACENT TO ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP ON 0.180 ON LEFT | | | | 0.00 | 0.00 | 0.00 | 673 |
| 0908GZ | 22831 | 5 | RESIDENCE ROAD PARKING B | ADJACENT TO ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.196 ON LEFT | | | | 0.00 | 0.00 | 0.00 | 1,390 |

HAVO-0909ZZ Subcomponent Breakdown

| Rte. No. | FMSS No. | Cycle Collected | Route Description | | | Concess Route | Func. Class | Paved Miles | Un-Paved Miles | Total Route Length | Manual Rated SQ/FT |
|----------|----------|-----------------|-----------------------|---|----|---------------|-------------|-------------|----------------|--------------------|--------------------|
| | | | Route Name | From | To | | | | | | |
| 0909AZ | 22292 | 5 | STEAM VENTS PARKING A | ADJACENT TO ROUTE 0211 (STEAM VENTS ROAD) AT MP 0.07 ON LEFT | | | | 0.00 | 0.00 | 0.00 | 1,514 |
| 0909BZ | 22292 | 5 | STEAM VENTS PARKING B | ADJACENT TO ROUTE 0211 (STEAM VENTS ROAD) AT MP 0.08 ON RIGHT | | | | 0.00 | 0.00 | 0.00 | 3,016 |
| 0909CZ | 22292 | 5 | STEAM VENTS PARKING C | ADJACENT TO ROUTE 0211 (STEAM VENTS ROAD) AT MP 0.04 ON LEFT | | | | 0.00 | 0.00 | 0.00 | 1,521 |

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HAVO

HAWAII VOLCANOES NATIONAL PARK

HAVO-0910ZZ Subcomponent Breakdown

| Rte. No. | FMSS No. | Cycle Collected | Route Name | From | To | Concess Route | Func. Class | Paved Miles | Un-Paved Miles | Total Route Length | Manual Rated SQ/FT |
|----------|----------|-----------------|-----------------------------|---|------------|---------------|-------------|-------------|----------------|--------------------|--------------------|
| 0910AZ | 22245 | 5 | KILAUEA PICNIC AREA PARKING | FROM ROUTE 0201 (KILAUEA OVERLOOK ROAD) AT MP 0.15 ON RIGHT | TO PARKING | | | 0.00 | 0.00 | 0.00 | 5,550 |
| 0910BZ | 22245 | 5 | KILAUEA OVERLOOK PARKING | FROM END OF ROUTE 0201 (KILAUEA OVERLOOK ROAD) | TO PARKING | | | 0.00 | 0.00 | 0.00 | 19,070 |

HAVO-0915ZZ Subcomponent Breakdown

| Rte. No. | FMSS No. | Cycle Collected | Route Name | From | To | Concess Route | Func. Class | Paved Miles | Un-Paved Miles | Total Route Length | Manual Rated SQ/FT |
|----------|----------|-----------------|---------------------------------------|---|----|---------------|-------------|-------------|----------------|--------------------|--------------------|
| 0915AZ | 42665 | 5 | THURSTON LAVA TUBE BUS PARKING AREA A | ADJACENT TO ROUTE 0010 (CRATER RIM DRIVE) AT MP 9.00 ON RIGHT | | | | 0.00 | 0.00 | 0.00 | 7,882 |
| 0915BZ | 42665 | 5 | THURSTON LAVA TUBE PARKING AREA B | ADJACENT TO ROUTE 0010 (CRATER RIM DRIVE) AT MP 9.01 ON LEFT | | | | 0.00 | 0.00 | 0.00 | 8,697 |

HAVO-0931ZZ Subcomponent Breakdown

| Rte. No. | FMSS No. | Cycle Collected | Route Name | From | To | Concess Route | Func. Class | Paved Miles | Un-Paved Miles | Total Route Length | Manual Rated SQ/FT |
|----------|----------|-----------------|---------------------------|---|----|---------------|-------------|-------------|----------------|--------------------|--------------------|
| 0931AZ | 22298 | NC | KEANAKAKOI PARKING AREA A | ADJACENT TO ROUTE 0010 (CRATER RIM DRIVE) (NORTH) | | | | 0.00 | 0.00 | 0.00 | |
| 0931BZ | 22298 | NC | KEANAKAKOI PARKING AREA B | ADJACENT TO ROUTE 0010 (CRATER RIM DRIVE) (SOUTH) | | | | 0.00 | 0.00 | 0.00 | |

NPS/RIP Subcomponent Details for HAVO

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HAVO

HAWAII VOLCANOES NATIONAL PARK

HAVO-0937ZZ Subcomponent Breakdown

| Rte. No. | FMSS No. | Cycle Collected | Route Name | From | To | Concess Route | Func. Class | Paved Miles | Un-Paved Miles | Total Route Length | Manual Rated SQ/FT |
|----------|----------|-----------------|---------------------------------|---|--|---------------|-------------|-------------|----------------|--------------------|--------------------|
| 0937AZ | 239125 | 5 | KILAUEA MILITARY CAMP PARKING A | FROM ROUTE 0214 (KILAUEA MILITARY CAMP ROAD) | TO ROUTE 0214 (KILAUEA MILITARY CAMP ROAD) | | | 0.00 | 0.00 | 0.00 | 37,398 |
| 0937BZ | 239125 | 5 | KILAUEA MILITARY CAMP PARKING B | ADJACENT TO ROUTES 0214 (KILAUEA MILITARY CAMP ROAD) AND 0215JZ (KILAUEA MILITARY CAMP ROAD J) | | | | 0.00 | 0.00 | 0.00 | 12,623 |
| 0937CZ | 239125 | 5 | KILAUEA MILITARY CAMP PARKING C | FROM ROUTES 0215EZ (KILAUEA MILITARY CAMP ROAD E), 0215GZ (KILAUEA MILITARY CAMP ROAD G), AND 0215HZ (KILAUEA MILITARY CAMP ROAD H) | TO PARKING | | | 0.00 | 0.00 | 0.00 | 22,990 |
| 0937DZ | 239125 | 5 | KILAUEA MILITARY CAMP PARKING D | ADJACENT TO ROUTE 0215EZ (KILAUEA MILITARY CAMP ROAD E) | | | | 0.00 | 0.00 | 0.00 | 476 |
| 0937EZ | 239125 | 5 | KILAUEA MILITARY CAMP PARKING E | ADJACENT TO ROUTE 0215HZ (KILAUEA MILITARY CAMP ROAD H) | | | | 0.00 | 0.00 | 0.00 | 565 |
| 0937FZ | 239125 | 5 | KILAUEA MILITARY CAMP PARKING F | ADJACENT TO ROUTE 0215HZ (KILAUEA MILITARY CAMP ROAD H) | | | | 0.00 | 0.00 | 0.00 | 943 |
| 0937GZ | 239125 | 5 | KILAUEA MILITARY CAMP PARKING G | ADJACENT TO ROUTE 0214 (KILAUEA MILITARY CAMP ROAD) | | | | 0.00 | 0.00 | 0.00 | 1,135 |
| 0937HZ | 239125 | 5 | KILAUEA MILITARY CAMP PARKING H | ADJACENT TO ROUTE 0215JZ (KILAUEA MILITARY CAMP ROAD J) | | | | 0.00 | 0.00 | 0.00 | 2,548 |
| 0937IZ | 239125 | 5 | KILAUEA MILITARY CAMP PARKING I | ADJACENT TO ROUTE 0215JZ (KILAUEA MILITARY CAMP ROAD J) | | | | 0.00 | 0.00 | 0.00 | 322 |
| 0937JZ | 239125 | 5 | KILAUEA MILITARY CAMP PARKING J | ADJACENT TO ROUTE 0215KZ (KILAUEA MILITARY CAMP ROAD K) | | | | 0.00 | 0.00 | 0.00 | 756 |
| 0937KZ | 239125 | 5 | KILAUEA MILITARY CAMP PARKING K | FROM ROUTES 0215DZ (KILAUEA MILITARY CAMP ROAD D), 0215HZ (KILAUEA MILITARY CAMP ROAD H), AND 0215KZ (KILAUEA MILITARY CAMP ROAD K) | TO PARKING | | | 0.00 | 0.00 | 0.00 | 14,934 |
| 0937LZ | 239125 | 5 | KILAUEA MILITARY CAMP PARKING L | ADJACENT TO ROUTE 0215DZ (KILAUEA MILITARY CAMP ROAD D) | | | | 0.00 | 0.00 | 0.00 | 1,033 |

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HAVO

HAWAII VOLCANOES NATIONAL PARK

HAVO-0937ZZ Subcomponent Breakdown

| Rte. No. | FMSS No. | Cycle Collected | Route Name | From | To | Concess Route | Func. Class | Paved Miles | Un-Paved Miles | Total Route Length | Manual Rated SQ/FT |
|----------|----------|-----------------|---------------------------------|---|--|---------------|-------------|-------------|----------------|--------------------|--------------------|
| 0937MZ | 239125 | 5 | KILAUEA MILITARY CAMP PARKING M | ADJACENT TO ROUTE 0215DZ (KILAUEA MILITARY CAMP ROAD D) | | | | 0.00 | 0.00 | 0.00 | 1,410 |
| 0937NZ | 239125 | 5 | KILAUEA MILITARY CAMP PARKING N | FROM ROUTE 0215KZ (KILAUEA MILITARY CAMP ROAD K) | TO PARKING | | | 0.00 | 0.00 | 0.00 | 4,965 |
| 0937OZ | 239125 | 5 | KILAUEA MILITARY CAMP PARKING O | FROM ROUTE 0215KZ (KILAUEA MILITARY CAMP ROAD K) | TO ROUTE 0215KZ (KILAUEA MILITARY CAMP ROAD K) | | | 0.00 | 0.00 | 0.00 | 8,675 |

HAVO-0938ZZ Subcomponent Breakdown

| Rte. No. | FMSS No. | Cycle Collected | Route Name | From | To | Concess Route | Func. Class | Paved Miles | Un-Paved Miles | Total Route Length | Manual Rated SQ/FT |
|----------|----------|-----------------|---|---|------------|---------------|-------------|-------------|----------------|--------------------|--------------------|
| 0938AZ | N/A | NC | KILAUEA MILITARY CAMP UNPAVED PARKING A | FROM ROUTE 0214 (KILAUEA MILITARY CAMP ROAD) | TO PARKING | | | 0.00 | 0.00 | 0.00 | 9,901 |
| 0938BZ | N/A | NC | KILAUEA MILITARY CAMP UNPAVED PARKING B | ADJACENT TO ROUTE 0215DZ (KILAUEA MILITARY CAMP ROAD D) | | | | 0.00 | 0.00 | 0.00 | 1,059 |

HAVO-0945ZZ Subcomponent Breakdown

| Rte. No. | FMSS No. | Cycle Collected | Route Name | From | To | Concess Route | Func. Class | Paved Miles | Un-Paved Miles | Total Route Length | Manual Rated SQ/FT |
|----------|----------|-----------------|--|--|----|---------------|-------------|-------------|----------------|--------------------|--------------------|
| 0945AZ | 240232 | NC | NAMAKANI PAIO CAMPGROUND UNPAVED PARKING A | ADJACENT TO ROUTE 0204A (NAMAKANI PAIO CAMPGROUND ROAD) AT MP 0.126 ON LEFT | | | | 0.00 | 0.00 | 0.00 | 8,550 |
| 0945BZ | 240232 | NC | NAMAKANI PAIO CAMPGROUND UNPAVED PARKING B | ADJACENT TO ROUTE 0204A (NAMAKANI PAIO CAMPGROUND ROAD) AT MP 0.156 ON RIGHT | | | | 0.00 | 0.00 | 0.00 | 2,025 |

| | | | |
|--|--|--|--|
| ROUTES ADDED FROM PREVIOUS INVENTORY: | | | |
|--|--|--|--|

| Route # | Route Name | Reason for Addition | Comments |
|---------|---------------------------------------|---------------------|--|
| 0215ZZ | KILAUEA MILITARY CAMP ROADS | OTHER | KILAUEA MILITARY CAMP ROADS WERE ADDED TO THE INVENTORY IN CYCLE 5 PER THE PARK'S REQUEST. |
| 0417 | MAUNA LOA EMERGENCY ACCESS ROAD | ROUTE SPLIT | CYCLE 4 ROUTE 0100A WAS SPLIT IN CYCLE 5 INTO PUBLIC (ROUTE 0100A) AND NONPUBLIC ROADS (ROUTE 0417) IN ORDER TO MATCH FMSS. |
| 0418 | KILAUEA MILITARY CAMP WATER TANK ROAD | OTHER | PAVED ROUTE ADDED TO THE INVENTORY IN CYCLE 5. |
| 0930 | FOOTPRINTS TRAILHEAD PARKING AREA | OTHER | PAVED PARKING ADDED TO THE INVENTORY IN CYCLE 5. |
| 0931ZZ | KEANAKAKOI PARKING AREAS | OTHER | PAVED PARKING ADDED TO THE INVENTORY IN CYCLE 5. ROUTE WAS NOT COLLECTED DURING THE CYCLE 5 MANUAL COLLECTION VISIT BECAUSE IT WAS INACCESSIBLE AND CLOSED DUE TO THE PRESENCE OF DANGEROUS VOLCANIC GASSES. |
| 0932 | SOUTH WEST RIFT ZONE PARKING | OTHER | PAVED PARKING ADDED TO THE INVENTORY IN CYCLE 5. ROUTE WAS NOT COLLECTED DURING THE CYCLE 5 MANUAL COLLECTION VISIT BECAUSE IT WAS INACCESSIBLE AND CLOSED DUE TO THE PRESENCE OF DANGEROUS VOLCANIC GASSES. |
| 0936 | PU'U LOA PETROGLYPHS PARKING | OTHER | PAVED PARKING ADDED TO THE INVENTORY IN CYCLE 5. |
| 0937ZZ | KILAUEA MILITARY CAMP PARKING AREAS | OTHER | KILAUEA MILITARY CAMP PARKING AREAS WERE ADDED TO THE INVENTORY IN CYCLE 5 PER THE PARK'S REQUEST. |
| 0939 | MULAWAI A PELE TRAILHEAD PARKING | OTHER | PAVED PARKING ADDED TO THE INVENTORY IN CYCLE 5. |
| 0940 | HILINA PALI HANDICAP OVERLOOK PARKING | OTHER | PAVED PARKING ADDED TO THE INVENTORY IN CYCLE 5. |

ROUTES ADDED FROM PREVIOUS INVENTORY:

| Route # | Route Name | Reason for Addition | Comments |
|---------|-------------------------------------|---------------------|--|
| 0941 | VOLCANO ART CENTER HANDICAP PARKING | OTHER | PAVED PARKING ADDED TO THE INVENTORY IN CYCLE 5. |

ROUTES MODIFIED FROM PREVIOUS INVENTORY:

| Route # | Route Name | Type of Modification | Comments |
|---------|---------------------------|----------------------|---|
| 0211 | STEAM VENTS ROAD | RECONSTRUCTED | ROUTE 0211 WAS RECONSTRUCTED AND TURNED INTO A ONE-WAY ROAD THAT WAS DRIVEN IN THE OPPOSITE DIRECTION THAN WAS PREVIOUSLY DRIVEN IN CYCLE 4 |
| 0909ZZ | STEAM VENTS PARKING AREAS | RECONSTRUCTED | THE STEAM VENT PARKING AREAS WERE RECONSTRUCTED IN CYCLE 5 AND NEW GPS WAS COLLECTED. |

OTHER CHANGES FROM PREVIOUS INVENTORY:

| Route # | Route Name | Type of Change | Comments |
|---------|----------------------------|--------------------------|---|
| 0010 | CRATER RIM DRIVE | OTHER | ROUTE IS APPROXIMATELY 10.60 MILES LONG, BUT ONLY 5.90 MILES WERE COLLECTED IN CYCLE 4 DUE TO A PORTION OF THE ROAD BEING INACCESSIBLE BECAUSE OF DANGEROUS VOLCANIC GASSES. THE SAME PORTION OF ROAD WAS INACCESSIBLE IN CYCLE 5, HOWEVER, THE MILEAGE WAS UPDATED TO INCLUDE THE UNCOLLECTED SECTION. |
| 0013 | OFFICE AREA STREET | FUNCTIONAL CLASS CHANGE | FUNCTIONAL CLASSIFICATION CHANGED FROM 1 TO 3 BECAUSE THIS ROAD PROVIDES ACCESS TO THE VISITOR CENTER AREAS. |
| 0100A | MAUNA LOA ROAD | OTHER | CYCLE 4 ROUTE 0100A WAS SPLIT IN CYCLE 5 INTO PUBLIC (ROUTE 0100A) AND NONPUBLIC ROADS (ROUTE 0417). THEREFORE, THE ROUTE LENGTH DECREASED. FUNCTIONAL CLASSIFICATION CHANGED FROM 2 TO 1 BECAUSE IT IS A PRIMARY PARK ROAD. |
| 0101 | HILINA PALI ROAD | FUNCTIONAL CLASS CHANGE | FUNCTIONAL CLASSIFICATION CHANGED FROM 1 TO 2 BECAUSE IT PROVIDES ACCESS TO AN OVERLOOK. |
| 0213 | KAHUKU ROAD | OTHER | FUNCTIONAL CLASSIFICATION CHANGED FROM 4 TO 2 BECAUSE IT PROVIDES ACCESS TO HIKING TRAILS AND IS NOT A PRIMITIVE ROAD. ROUTE WAS CONSIDERED TO BE ENTIRELY UNPAVED IN CYCLE 4, BUT A PAVED PORTION WAS COLLECTED IN CYCLE 5. |
| 0214 | KILAUEA MILITARY CAMP ROAD | COLLECTION METHOD CHANGE | ROUTE WAS COLLECTED WITH THE DATA COLLECTION VEHICLE (DCV) IN CYCLE 5 INSTEAD OF BEING MANUALLY RATED (AS WAS DONE IN CYCLE 4). |
| 0400 | WATER TANK ROAD | FUNCTIONAL CLASS CHANGE | FUNCTIONAL CLASSIFICATION CHANGED FROM 4 TO 6 BECAUSE THIS ROAD HAS RESTRICTED ACCESS. |
| 0401 | NORTH RESIDENCE ROAD | ROUTES COMBINED | CYCLE 4 ROUTES 0401 AND 0402 WERE COMBINED IN CYCLE 5 BECAUSE THEY MAKE UP A CONTINUOUS ROAD THAT IS MAINTAINED AS ONE LOCATION IN FMSS. FUNCTIONAL CLASSIFICATION CHANGED FROM 4 TO 5 BECAUSE THIS IS AN ADMINISTRATIVE ROAD WITH PUBLIC ACCESS PERMITTED. |

| OTHER CHANGES FROM PREVIOUS INVENTORY: | | | |
|--|--|-------------------------|--|
| Route # | Route Name | Type of Change | Comments |
| 0403 | SOUTH RESIDENCE LOOP | FUNCTIONAL CLASS CHANGE | FUNCTIONAL CLASSIFICATION CHANGED FROM 4 TO 5 BECAUSE THIS IS AN ADMINISTRATIVE ROUTE WITH PUBLIC ACCESS PERMITTED. |
| 0404 | TREE MOLDS STABLE ROAD | OTHER | ROUTE LENGTH INCREASED DUE TO THE ADDITION OF UNPAVED LOOP AT THE END OF ROUTE. FUNCTIONAL CLASSIFICATION CHANGED FROM 4 TO 5 BECAUSE THIS IS AN ADMINISTRATIVE ROAD WITH PUBLIC ACCESS PERMITTED. |
| 0405 | AINAHOU ROAD | FUNCTIONAL CLASS CHANGE | FUNCTIONAL CLASSIFICATION CHANGED FROM 6 TO 5 BECAUSE THIS IS AN ADMINISTRATIVE ROAD WITH PUBLIC ACCESS PERMITTED. |
| 0409 | RESOURCE MANAGEMENT ROAD | ROUTE NAME | ROUTE NAME CHANGED FROM "RESEARCH CENTER ROAD". |
| 0416ZZ | KILAUEA WATER TANKS AREA ROADS | OTHER | CYCLE 4 ROUTE 0902 WAS CHANGED FROM A PARKING AREA TO A ROAD IN CYCLE 5. AS A RESULT THE ROUTE NUMBER CHANGED FROM 0902 TO 0416ZZ. |
| 0904 | VOLCANO HOUSE PARKING | OTHER | PARKING AREA CHANGED TO A CONCESSIONAIRE MAINTAINED ROUTE IN CYCLE 5. |
| 0905 | OHIA WING PARKING | OTHER | IMPROVED PARKING AREA GPS WAS COLLECTED IN CYCLE 5. ROUTE NAME CHANGED FROM "VOLCANO HOUSE BLDG #B11 & #44 PARKING" AND FMSS NUMBER CHANGED FROM 42656. |
| 0906 | VOLCANO HOUSE HOTEL SERVICE AREA BLDG #B167 | SQ FEET CHANGE | IMPROVED PARKING AREA GPS WAS COLLECTED IN CYCLE 5. |
| 0908D | VISITORS EMERGENCY OPERATIONS CENTER PARKING | ROUTE SPLIT | PARKING AREA 0908D WAS SPLIT OUT OF ROUTE 0908ZZ BECAUSE IT IS A PUBLIC ACCESS PARKING LOT. ROUTE NAME CHANGED FROM "HAZARDOUS STORAGE PARKING". |
| 0908ZZ | KILAUEA MAINTENANCE YARD PARKING AREAS | OTHER | THREE PARKING AREA SECTIONS WERE COMBINED WITH THIS LOCATION (ROUTES 0908EZ, 0908FZ, AND 0908GZ) AND ONE SECTION OF PARKING WAS SPLIT INTO A SEPARATE LOCATION (ROUTE 0908D) IN CYCLE 5. |

OTHER CHANGES FROM PREVIOUS INVENTORY:

| Route # | Route Name | Type of Change | Comments |
|---------|------------------------------------|---------------------|--|
| 0911 | VOLCANO OBSERVATORY PARKING | ROUTE SPLIT | CYCLE 4 ROUTE 0911 WAS SPLIT INTO PUBLIC (ROUTE 0911) AND NONPUBLIC (ROUTE 0935) SECTIONS IN CYCLE 5. |
| 0912 | HALEMAUMAU OVERLOOK PARKING | OTHER | PARKING AREA WAS NOT COLLECTED IN CYCLE 4 AND CYCLE 5 DUE TO IT BEING CLOSED BECAUSE OF THE PRESENCE OF DANGEROUS VOLCANIC GASSES. |
| 0917 | RESOURCE MANAGEMENT AREA PARKING | ROUTE NAME | ROUTE NAME CHANGED FROM "RESEARCH CENTER PARKING". |
| 0925 | KIPUKA PUAULU DAY USE AREA PARKING | SURFACE TYPE CHANGE | ROUTE 0925 WAS ERRONEOUSLY COLLECTED AS ROUTE 0922 IN CYCLE 4. ROUTE 0922 WAS REMOVED FROM THE INVENTORY IN CYCLE 5 BECAUSE IT WAS A DUPLICATE LOCATION IN FMSS FOR ROUTE 0925. ROUTE NAME CHANGED FROM "BIRD PARK PICNIC SPUR PARKING". |
| 0933 | KULANAOKUAIKI CAMPGROUND PARKING | OTHER | ROUTE CHANGED FROM A ROAD TO A PARKING AREA IN CYCLE IN ORDER TO MATCH FMSS. IT WAS ROUTE 0212 (KULANAOKUAIKI CAMPGROUND ACCESS ROAD) IN CYCLE 4. |
| 0935 | JAGGER EMPLOYEE PARKING | ROUTE SPLIT | CYCLE 4 ROUTE 0911 WAS SPLIT INTO PUBLIC (0911) AND NONPUBLIC (0935) SECTIONS DURING THE CYCLE 5 ROUTE ID MEETING PER THE PARK'S REQUEST. IMPROVED GPS WAS COLLECTED IN CYCLE 5. |

Section 3

Park Summary Information



Hawaii Volcanoes National Park



Federal Lands Highway
Road Inventory Program

HAVO: PAVED ROUTE MILES AND PERCENTAGES BY FUNCTIONAL CLASS AND PCR

NOTE: The 49.79 Miles listed as Totals of Total Miles, in the lower right corner of the chart, excludes the 4.706 Mile portion of Route 0010 that was inaccessible due to hazardous volcanic gas conditions.

| F.C. | Pavement Condition Rating (PCR) | | | | | | | | TOTAL MILES |
|---------------|---------------------------------|---------------|--------------|---------------|--------------|--------------|--------------------|---------------|--------------|
| | Poor (0-60) | | Fair (61-84) | | Good (85-94) | | Excellent (95-100) | | |
| | MILES | % | MILES | % | MILES | % | MILES | % | |
| 1 | 0.02 | 0.04% | 0.19 | 0.38% | 0.74 | 1.49% | 24.99 | 50.19% | 25.94 |
| 2 | 6.07 | 12.19% | 9.00 | 18.08% | 1.78 | 3.58% | 3.08 | 6.19% | 19.93 |
| 3 | 0.12 | 0.24% | 0.18 | 0.36% | 0.60 | 1.21% | 1.77 | 3.55% | 2.67 |
| 4 | | | | | | | | | |
| 5 | | | 0.08 | 0.16% | 0.31 | 0.62% | 0.52 | 1.04% | 0.91 |
| 6 | 0.04 | 0.08% | 0.04 | 0.08% | 0.08 | 0.16% | 0.18 | 0.36% | 0.34 |
| 7 | | | | | | | | | |
| 8 | | | | | | | | | |
| Totals | 6.25 | 12.55% | 9.49 | 19.06% | 3.51 | 7.05% | 30.54 | 61.33% | 49.79 |

Note: The information in this table is derived from the PMS_20 table in the Park database, which only contains processed data from routes collected with the Data Collection Vehicle (DCV). Information for Manually Rated Routes (MRR) and Parking Areas is not reported in this table. Only Functional Class 1, 2, & 7 routes, and any new routes not previously collected by RIP, are collected in Large Parks.

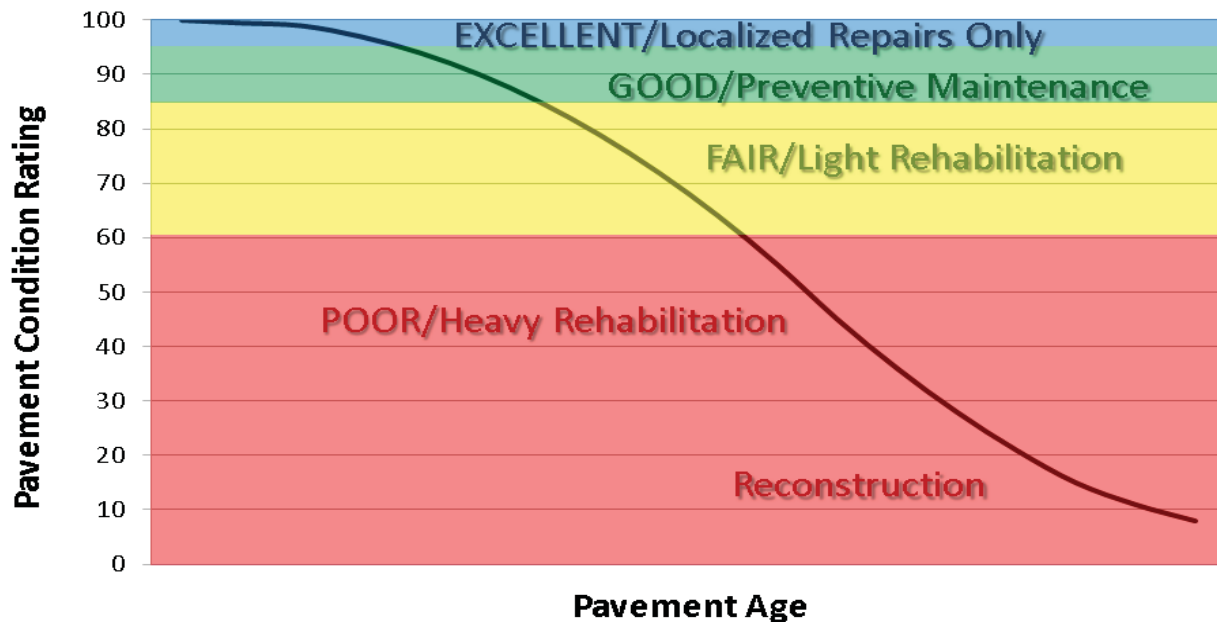
Explanation of the Excellent, Good, Fair and Poor Condition Descriptions

In addition to the RIP Index changes that have been implemented in Cycle 5, we will also aim to provide greater assistance in translating excellent/good/fair/poor categories into pavement needs categories. The PCR can be used to indicate the place in the Pavement Life Cycle and the types of treatments that should be considered now and into the future.

- Excellent/New: PCR of 95-100. Pavements in this range will require only spot repairs
- Good: PCR of 85-94. Pavements in this range will likely be candidates for Preventive Maintenance. Examples include Chip and Slurry Seals, Micro Surfacing and Thin Overlays.
- Fair: PCR of 61-84. Pavements in this range will likely be candidates of Light Rehabilitation (L3R). Examples include single-lift overlays up to 2.5 inches in total thickness, milling and overlays.
- Poor: PCR of 0-60. Pavements in this range will likely be candidates of Heavy Rehabilitation or Reconstruction (H3R or 4R). Examples include Pulverization, Multiple Lift Overlays, and Reconstruction.

At this time, specific Maintenance and Rehabilitation activities should be evaluated and recommended at the project level. Site-specific conditions that influence treatment type should be determined based on performing a subsurface investigation and/or pavement condition survey, and not be based solely on RIP data. Additionally, RIP produces a snapshot of conditions the year in which the data was collected. For further information or to obtain additional Pavement Management System's data from our Highway Pavement Management Application (HPMA) please contact the Eastern Federal Lands pavement team.

Condition Categories and Treatments

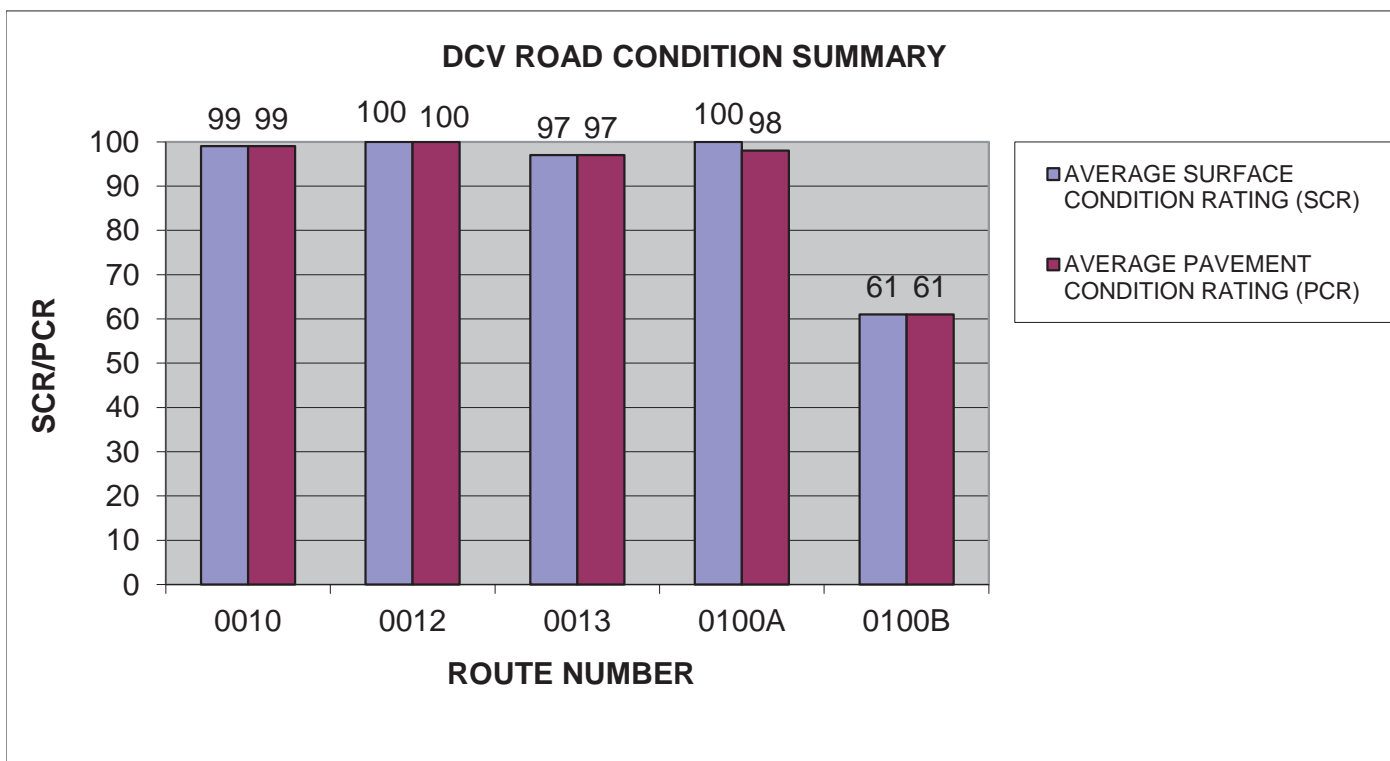


HAVO: DCV ROAD CONDITION SUMMARY

DCV - Data Collection Vehicle

| ROUTE NUMBER | ROUTE NAME | FUNCT CLASS | PAVED LENGTH | SURFACE TYPE | AVERAGE SURFACE CONDITION RATING (SCR) | AVERAGE PAVEMENT CONDITION RATING (PCR) |
|--------------|------------------------|-------------|--------------|--------------|--|---|
| 0010 | CRATER RIM DRIVE | 1 | 10.60 | ASPHALT | 99 | 99 |
| 0012 | CHAIN OF CRATERS ROAD | 1 | 18.56 | ASPHALT | 100 | 100 |
| 0013 | OFFICE AREA STREET | 3 | 0.05 | ASPHALT | 97 | 97 |
| 0100A | MAUNA LOA ROAD | 1 | 1.49 | ASPHALT | 100 | 98 |
| 0100B | MAUNA LOA LOOKOUT ROAD | 2 | 9.81 | ASPHALT | 61 | 61 |

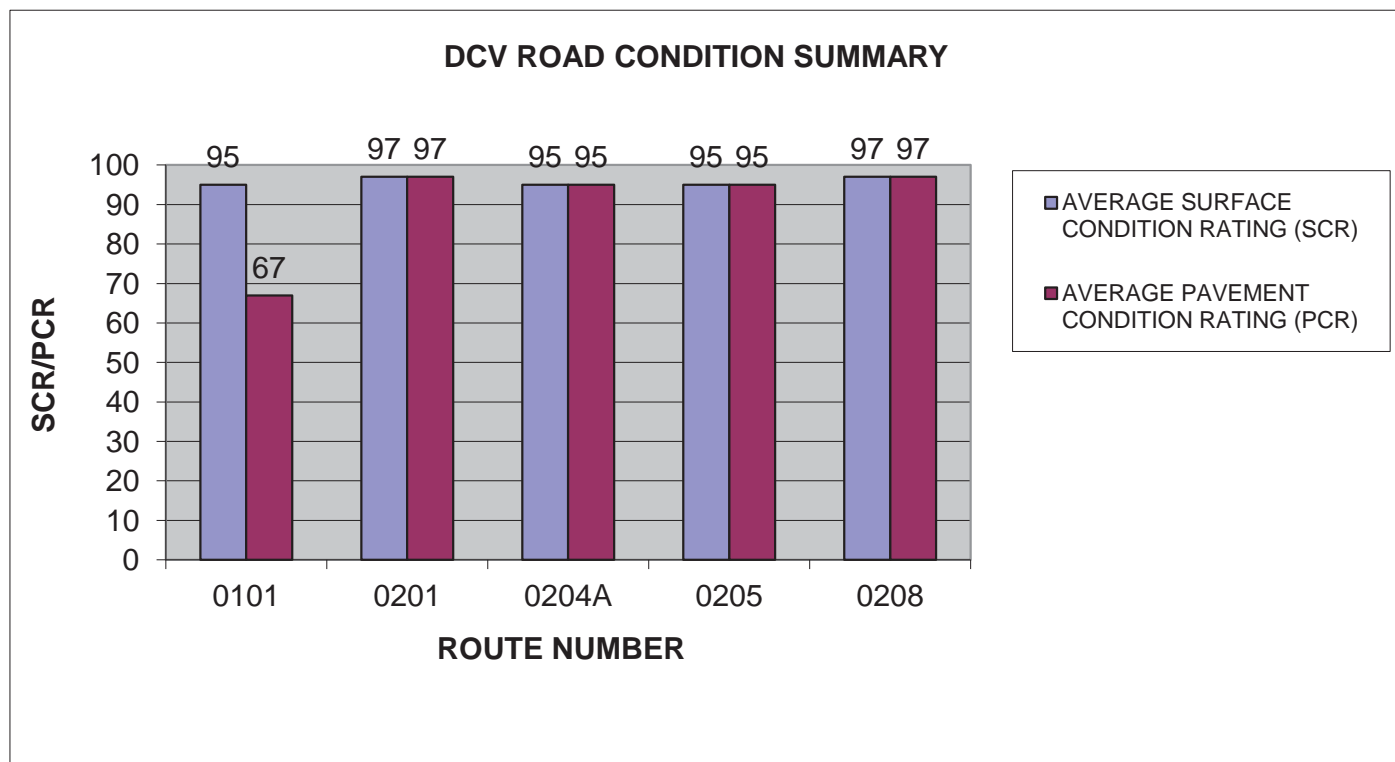
NOTE: Data was not collected along Route 0010 from mile posts 2.83 to 7.54 because that portion of the road was inaccessible due to hazardous volcanic gas conditions.



HAVO: DCV ROAD CONDITION SUMMARY

DCV - Data Collection Vehicle

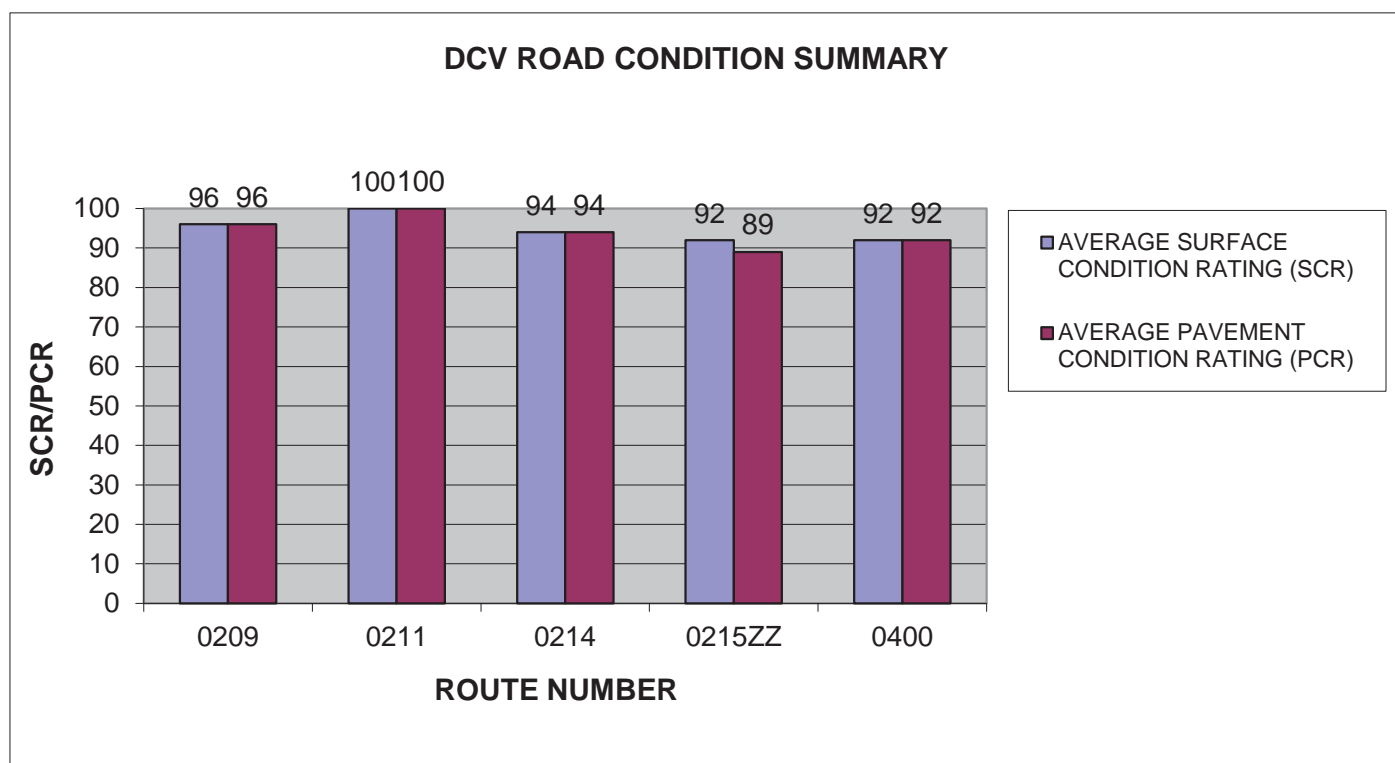
| ROUTE NUMBER | ROUTE NAME | FUNCT CLASS | PAVED LENGTH | SURFACE TYPE | AVERAGE SURFACE CONDITION RATING (SCR) | AVERAGE PAVEMENT CONDITION RATING (PCR) |
|--------------|-------------------------------|-------------|--------------|--------------|--|---|
| 0101 | HILINA PALI ROAD | 2 | 8.50 | ASPHALT | 95 | 67 |
| 0201 | KILAUEA OVERLOOK ROAD | 2 | 0.20 | ASPHALT | 97 | 97 |
| 0204A | NAMAKANI PAJO CAMPGROUND ROAD | 3 | 0.32 | ASPHALT | 95 | 95 |
| 0205 | TREE MOLDS ROAD | 2 | 0.56 | ASPHALT | 95 | 95 |
| 0208 | MAUNA ULU ACCESS ROAD | 2 | 0.54 | ASPHALT | 97 | 97 |



HAVO: DCV ROAD CONDITION SUMMARY

DCV - Data Collection Vehicle

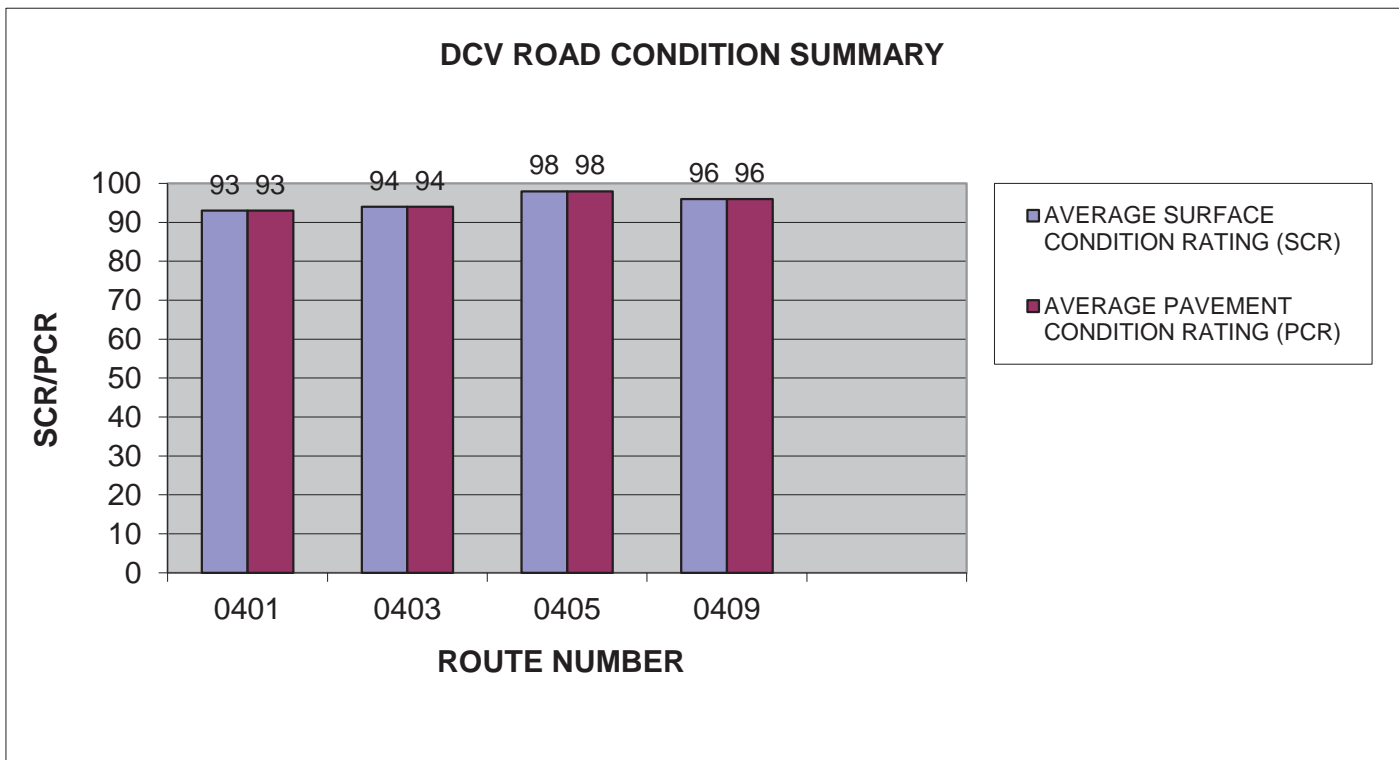
| ROUTE NUMBER | ROUTE NAME | FUNCT CLASS | PAVED LENGTH | SURFACE TYPE | AVERAGE SURFACE CONDITION RATING (SCR) | AVERAGE PAVEMENT CONDITION RATING (PCR) |
|--------------|-----------------------------|-------------|--------------|--------------|--|---|
| 0209 | PUU PUI OVERLOOK ROAD | 2 | 0.20 | ASPHALT | 96 | 96 |
| 0211 | STEAM VENTS ROAD | 2 | 0.12 | ASPHALT | 100 | 100 |
| 0214 | KILAUEA MILITARY CAMP ROAD | 3 | 0.20 | ASPHALT | 94 | 94 |
| 0215ZZ | KILAUEA MILITARY CAMP ROADS | 3 | 1.63 | ASPHALT | 92 | 89 |
| 0400 | WATER TANK ROAD | 6 | 0.34 | ASPHALT | 92 | 92 |



HAVO: DCV ROAD CONDITION SUMMARY

DCV - Data Collection Vehicle

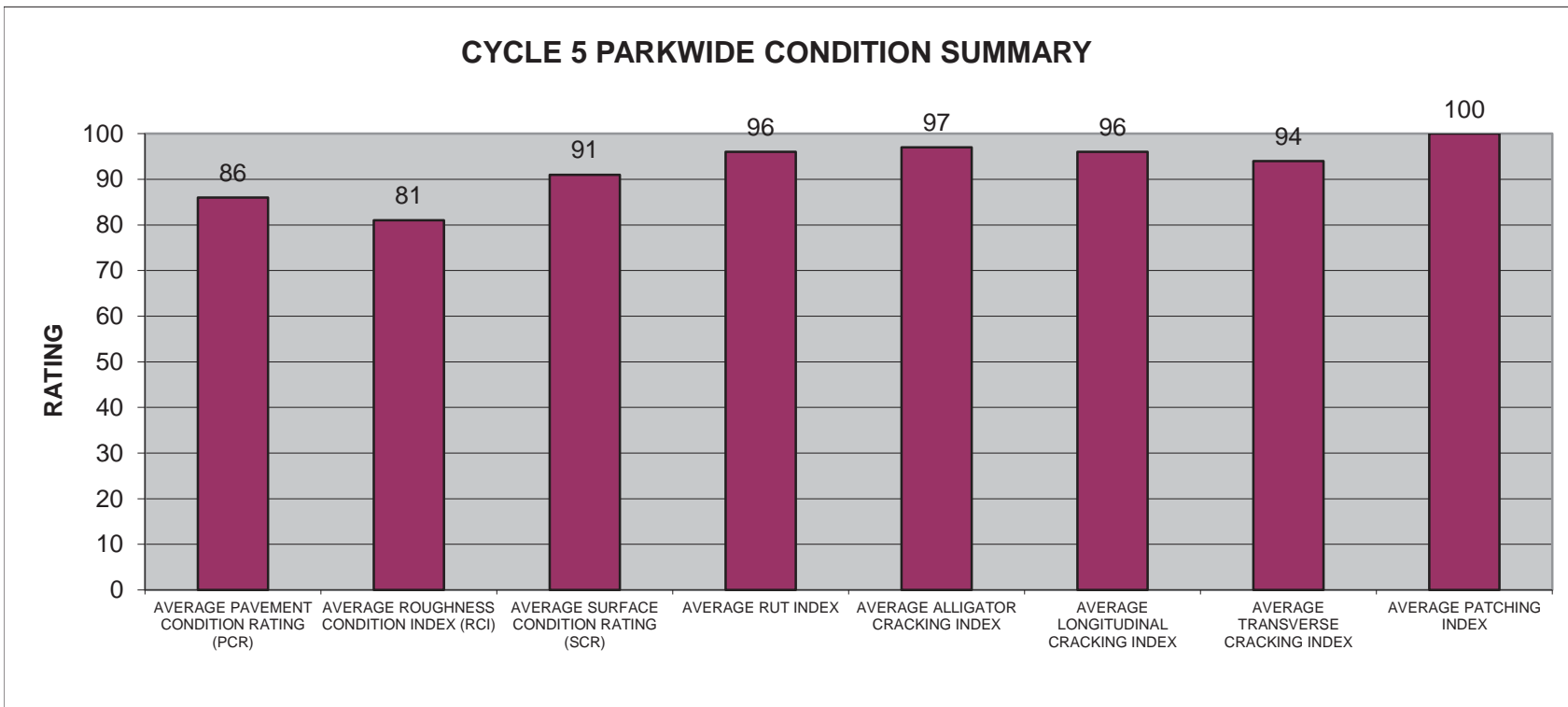
| ROUTE NUMBER | ROUTE NAME | FUNCT CLASS | PAVED LENGTH | SURFACE TYPE | AVERAGE SURFACE CONDITION RATING (SCR) | AVERAGE PAVEMENT CONDITION RATING (PCR) |
|--------------|--------------------------|-------------|--------------|--------------|--|---|
| 0401 | NORTH RESIDENCE ROAD | 5 | 0.43 | ASPHALT | 93 | 93 |
| 0403 | SOUTH RESIDENCE LOOP | 5 | 0.42 | ASPHALT | 94 | 94 |
| 0405 | AINAHOU ROAD | 5 | 0.06 | ASPHALT | 98 | 98 |
| 0409 | RESOURCE MANAGEMENT ROAD | 3 | 0.47 | ASPHALT | 96 | 96 |



HAVO: PARKWIDE DCV CONDITION SUMMARY

| AVERAGE PAVEMENT CONDITION RATING (PCR) | AVERAGE ROUGHNESS CONDITION INDEX (RCI) | AVERAGE SURFACE CONDITION RATING (SCR) | AVERAGE RUT INDEX | AVERAGE ALLIGATOR CRACKING INDEX | AVERAGE LONGITUDINAL CRACKING INDEX | AVERAGE TRANSVERSE CRACKING INDEX | AVERAGE PATCHING INDEX |
|---|---|--|-------------------|----------------------------------|-------------------------------------|-----------------------------------|------------------------|
| 86 | 81 | 91 | 96 | 97 | 96 | 94 | 100 |

All Index values are based on Data Collection Vehicle (DCV) driven roads that were collected in Cycle-5.
 Roughness data is only collected on routes with lengths greater than 0.5 miles and a posted speed limit of 25 MPH or greater.



Section 4

Park Route Location Maps

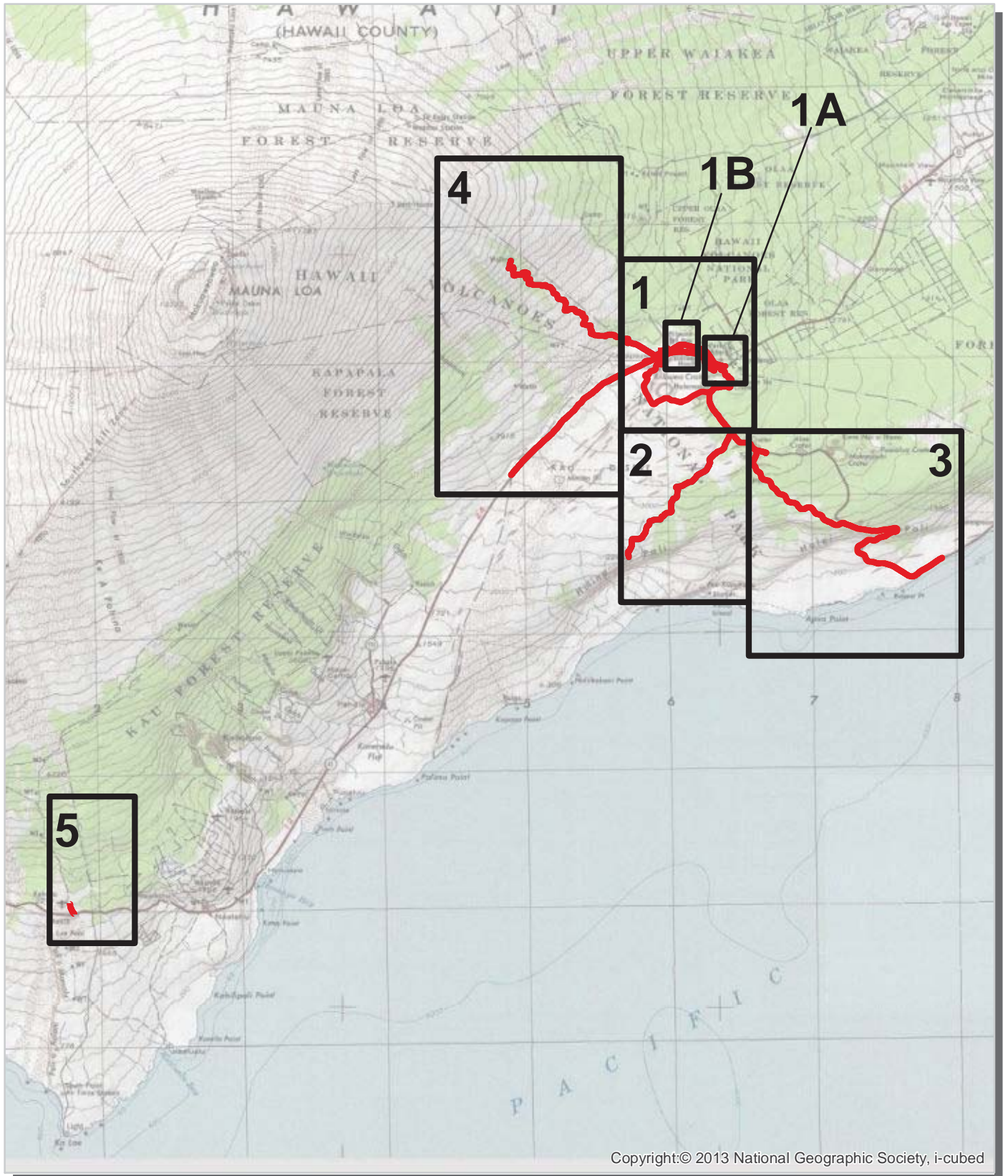


Hawaii Volcanoes National Park



Federal Lands Highway
Road Inventory Program

Hawaii Volcano National Park Route Location Map Key Map

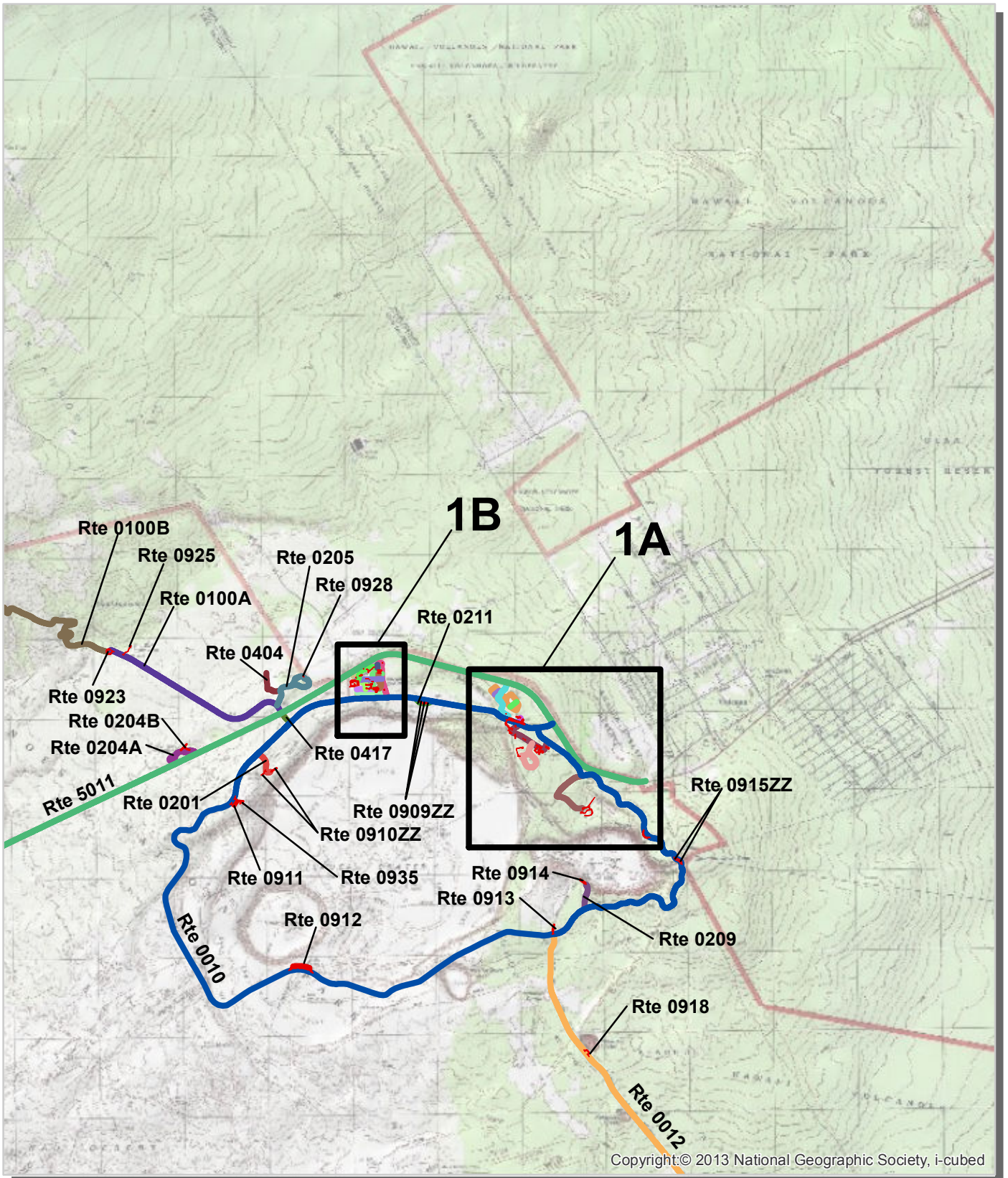


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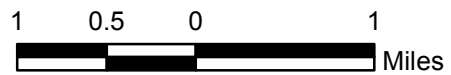
 Cycle 5 Collected Routes



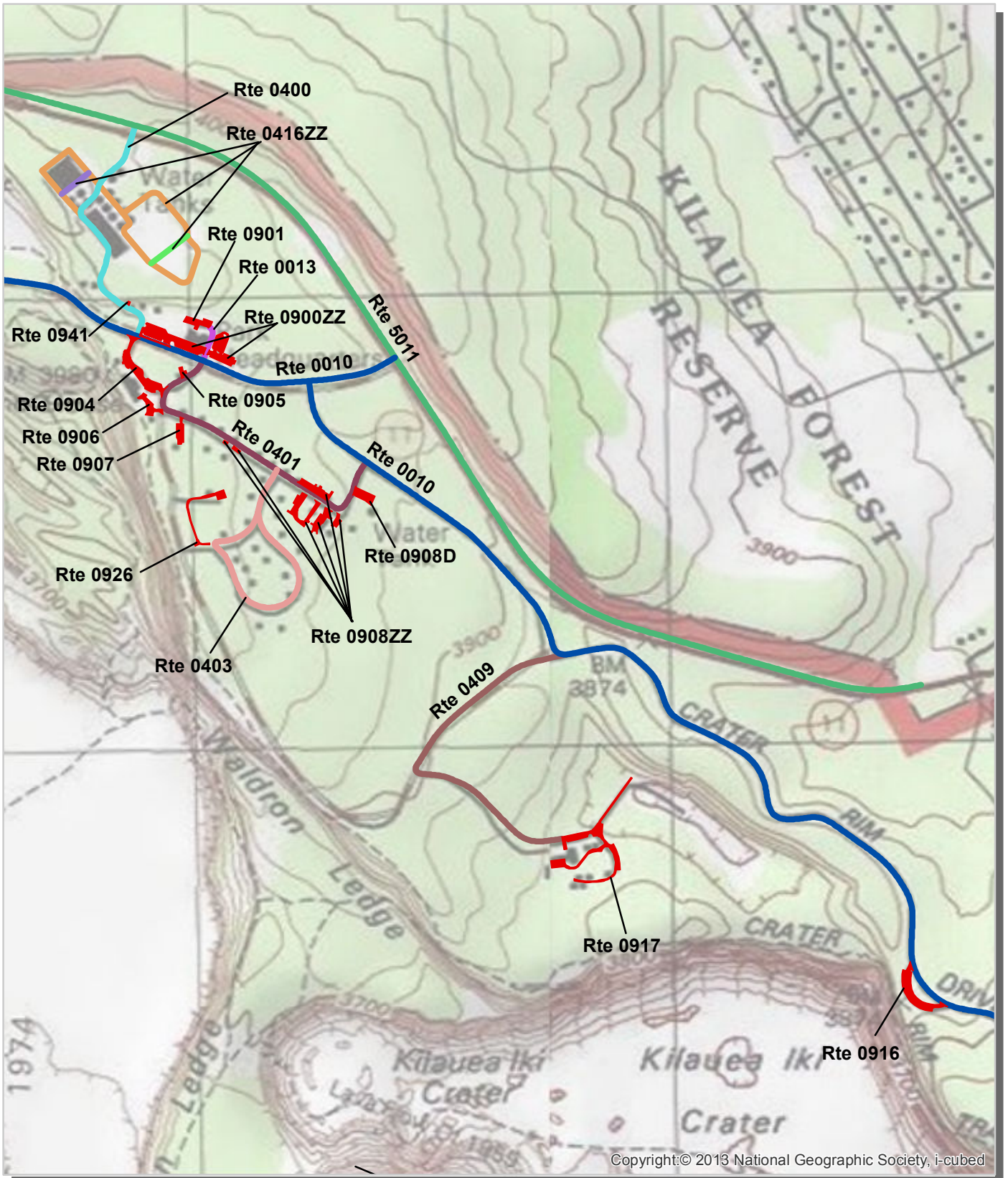
Hawaii Volcano National Park Route Location Map Area 1



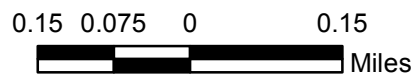
Unique colors used to differentiate routes



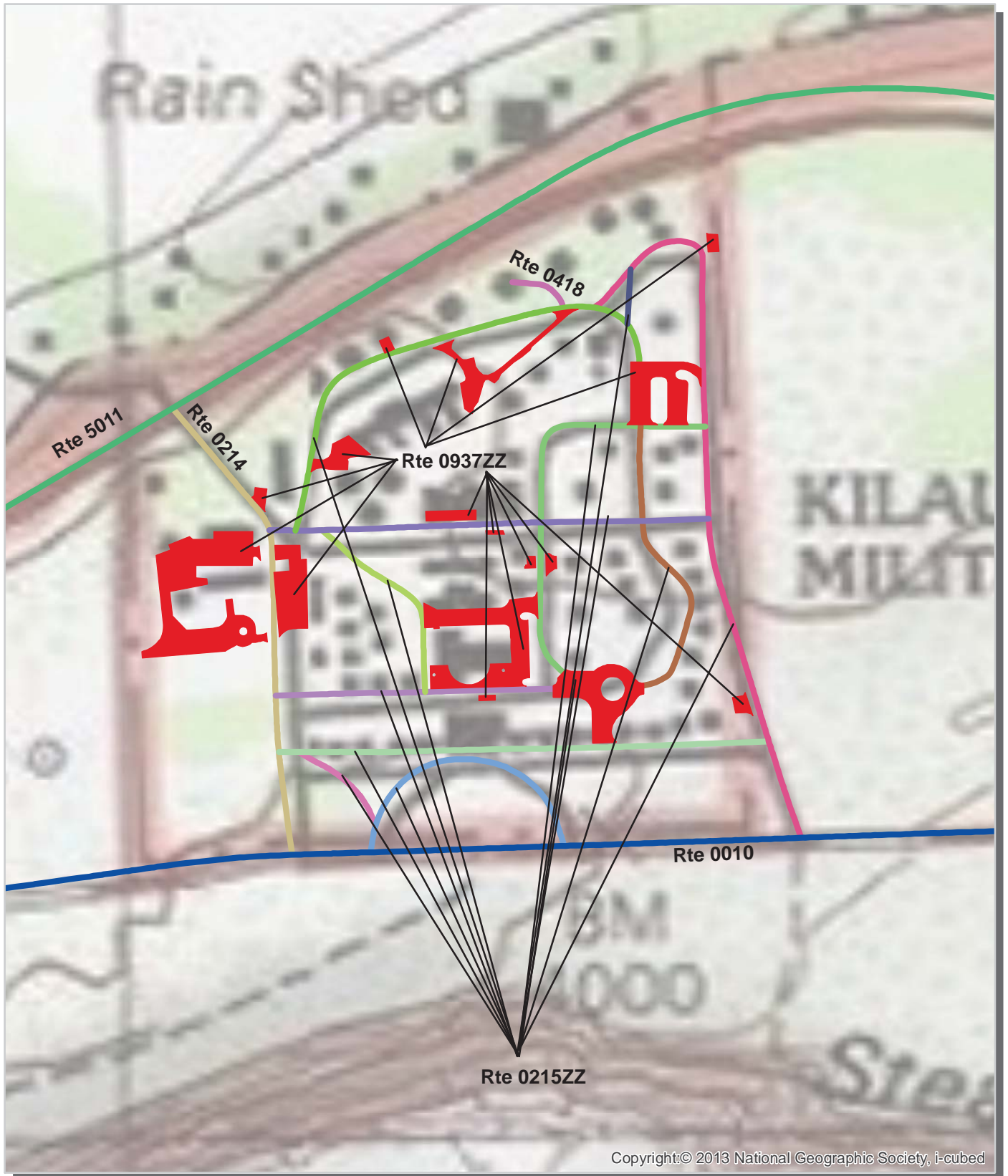
Hawaii Volcano National Park Route Location Map Area 1A



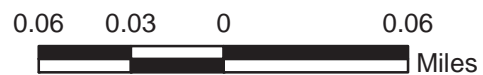
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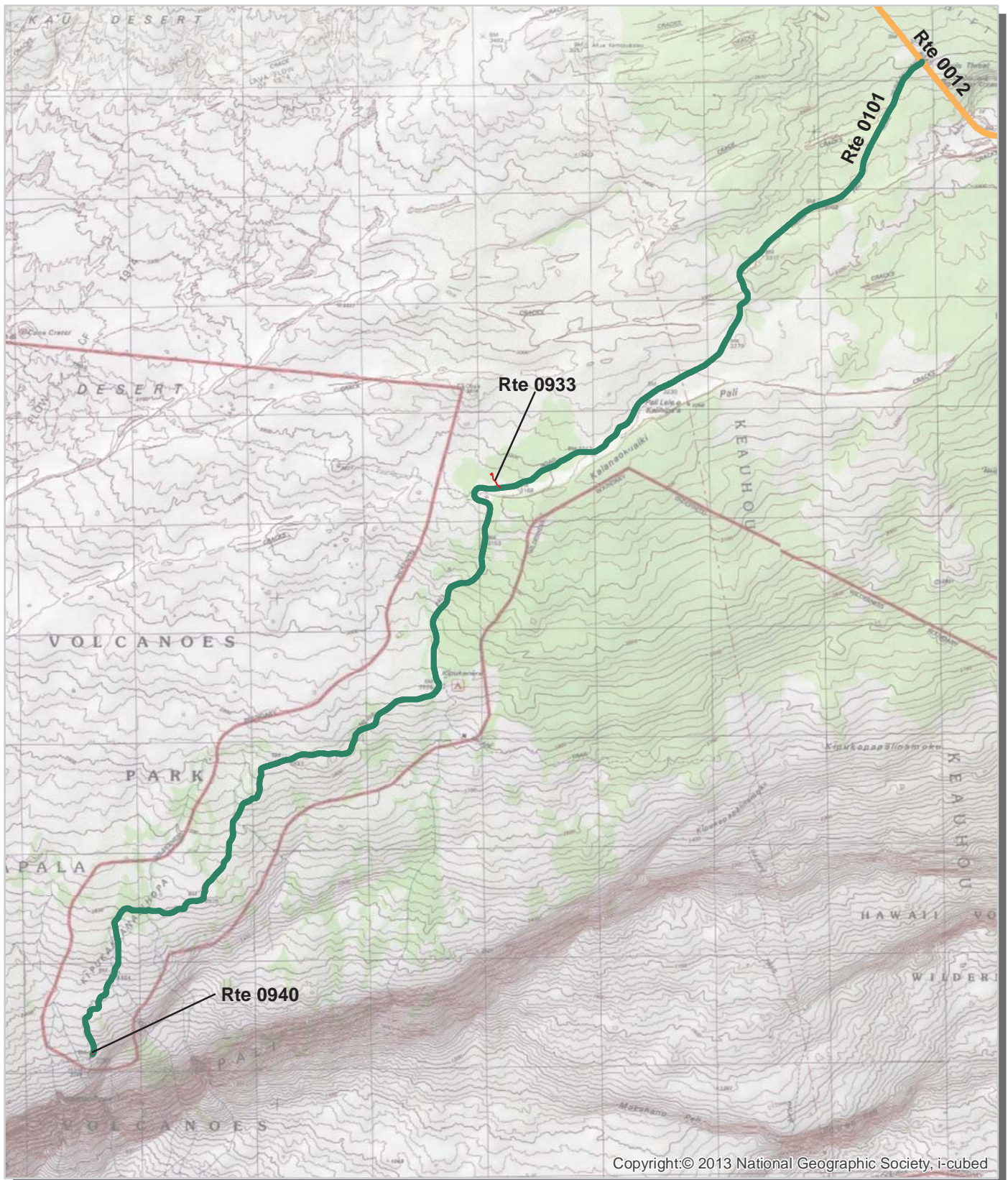
Hawaii Volcano National Park
Route Location Map
Area 1B



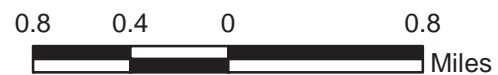
Unique colors used to differentiate routes



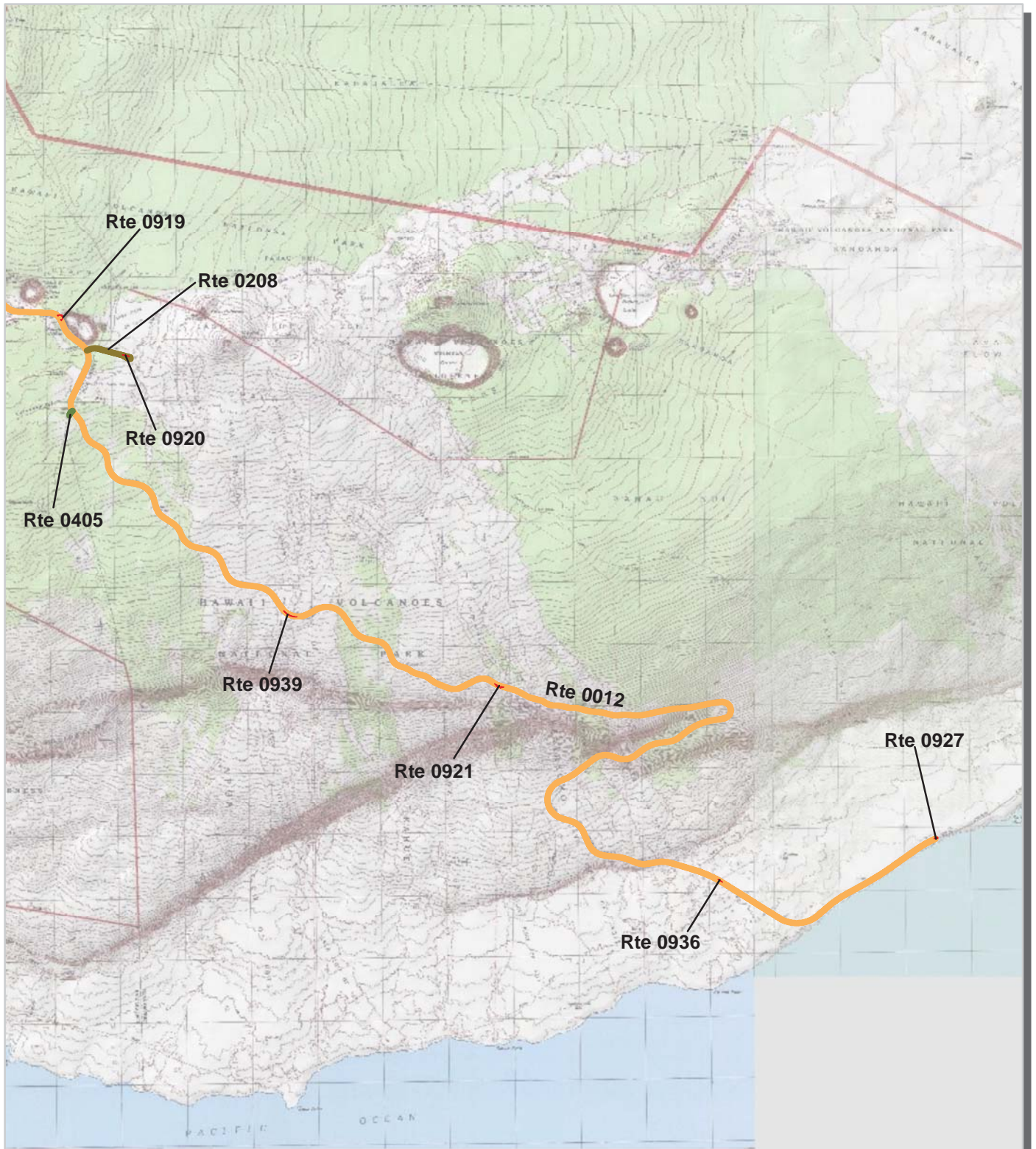
Hawaii Volcano National Park Route Location Map Area 2



Unique colors used to differentiate routes

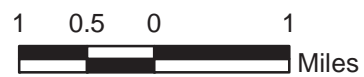


Hawaii Volcano National Park Route Location Map Area 3

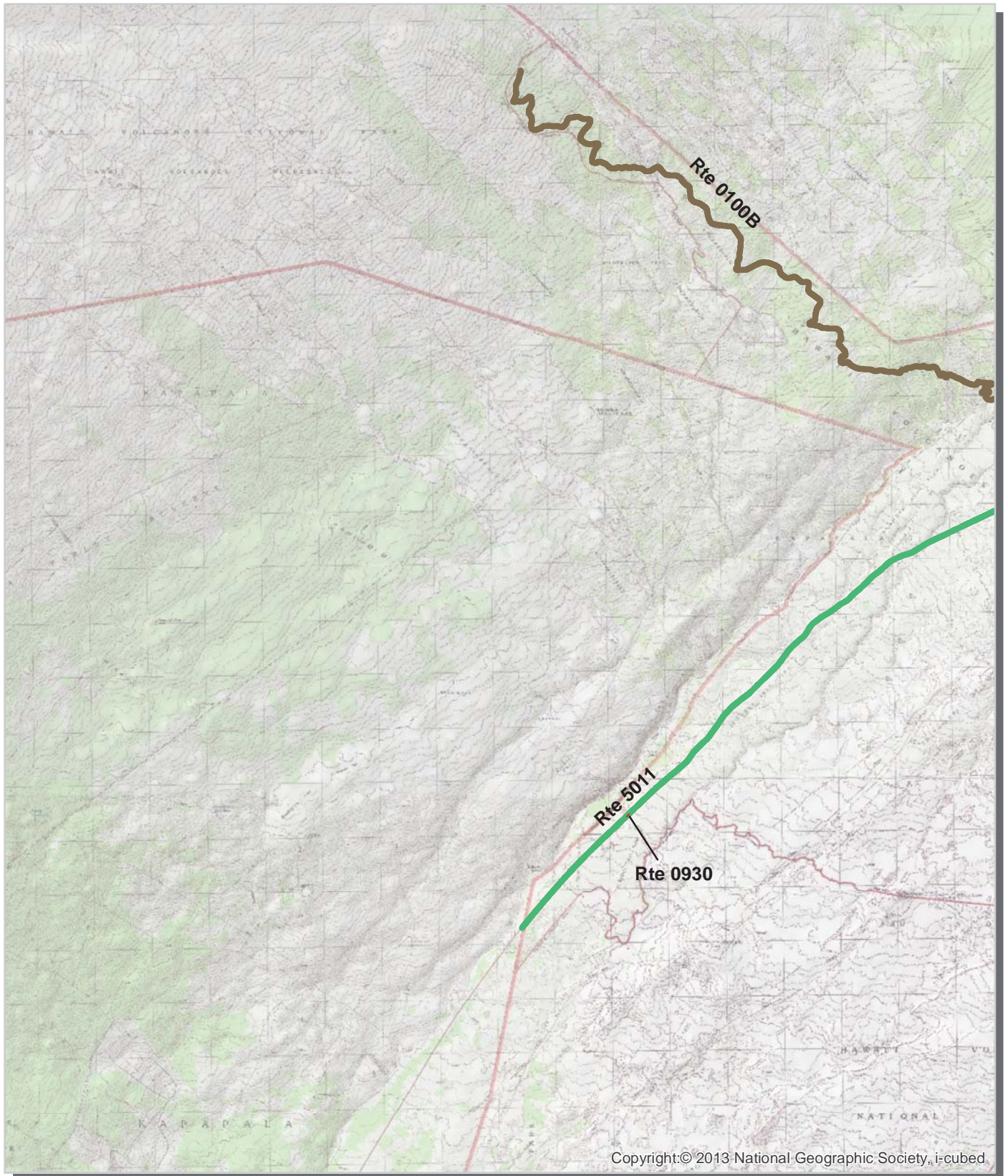


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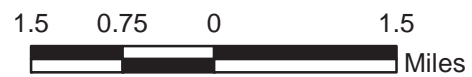
Unique colors used to differentiate routes



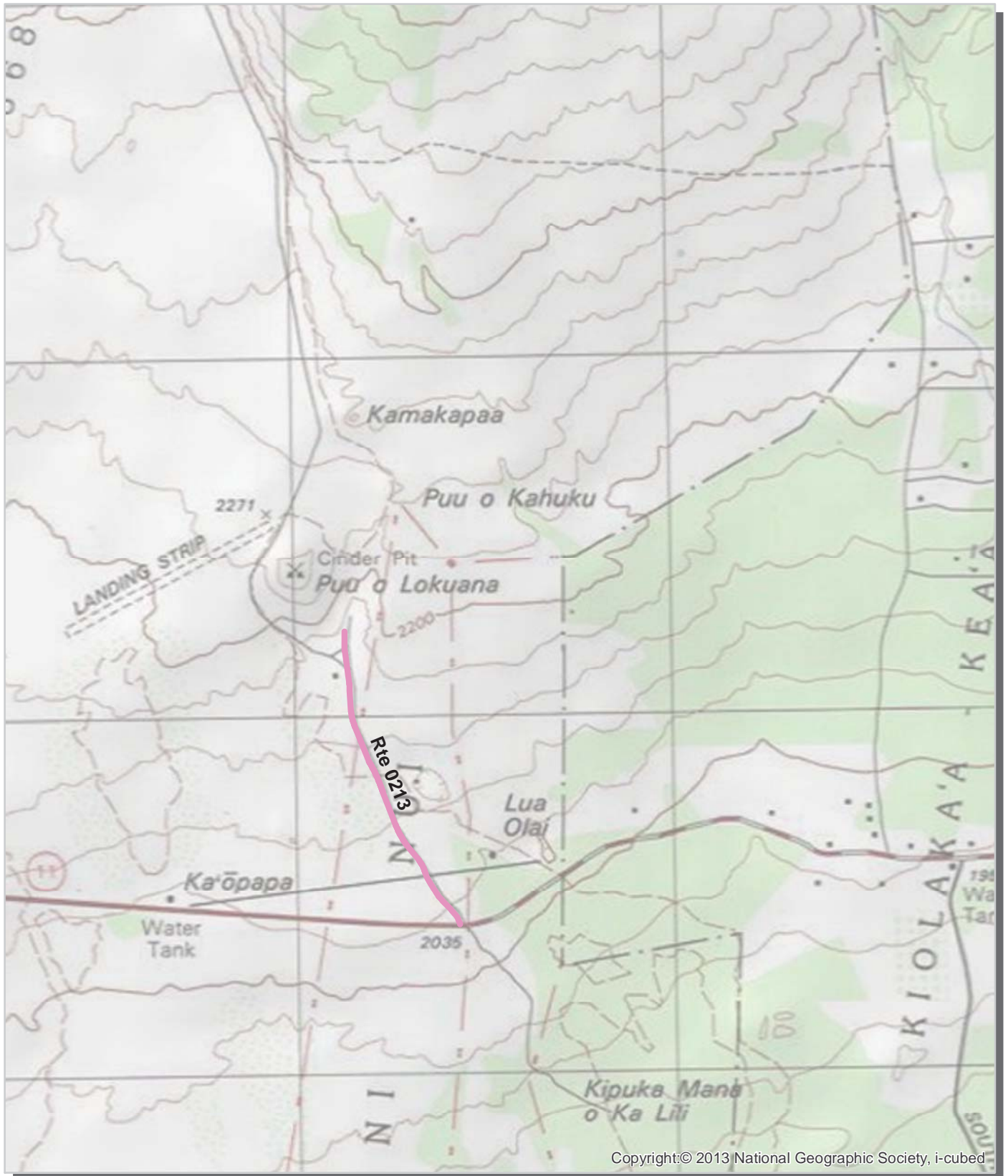
Hawaii Volcano National Park Route Location Map Area 4



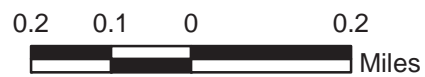
Unique colors used to differentiate routes



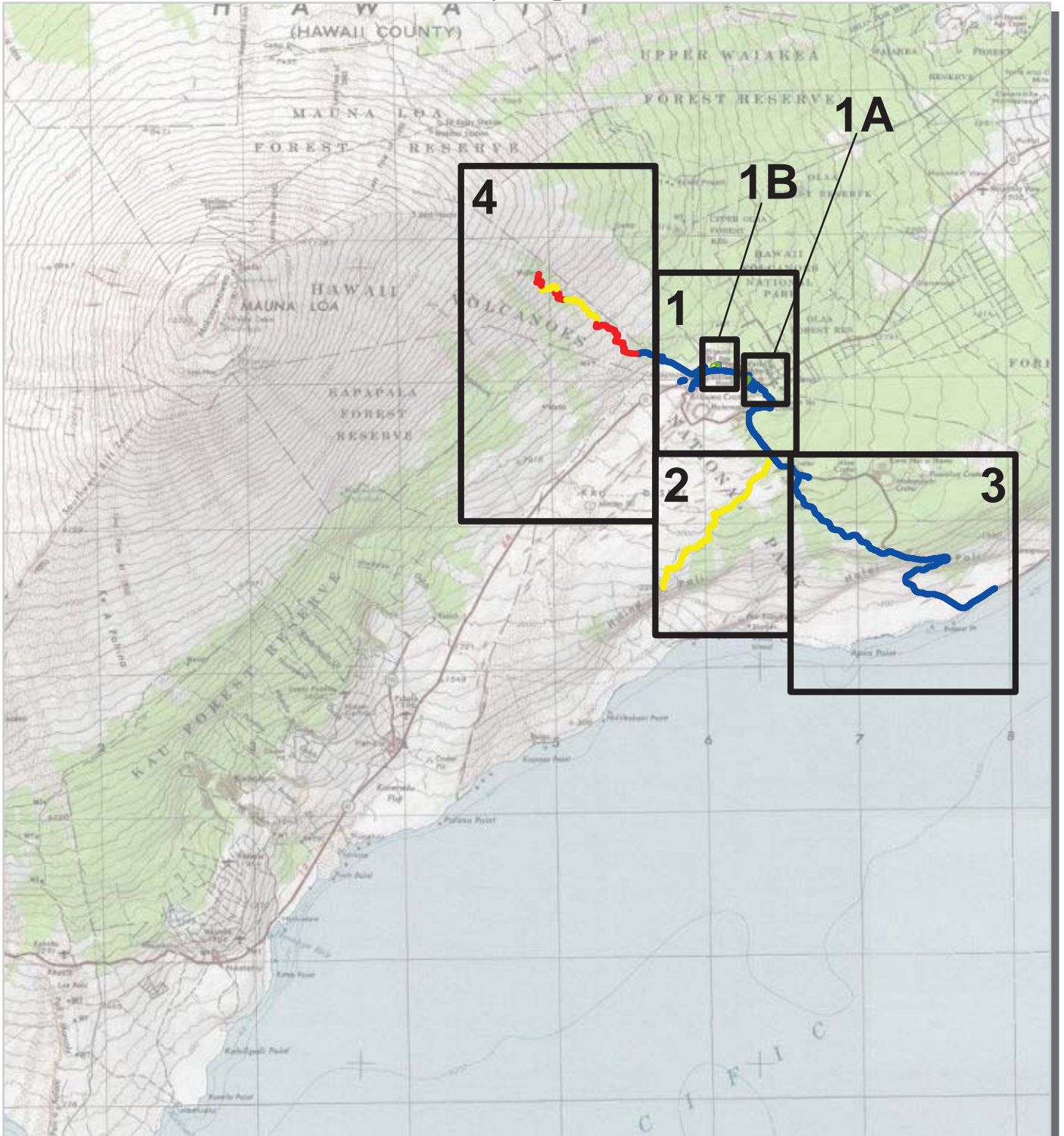
Hawaii Volcano National Park
Route Location Map
Area 5



Unique colors used to differentiate routes



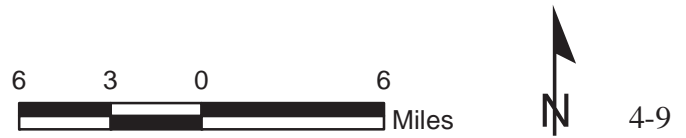
Hawaii Volcano National Park Route Condition Map PCR - Mile by Mile Key Map



| | | | | | |
|-----|----------|-----------|-----------|------------|---------|
| PCR | Poor | Fair | Good | Excellent | No Data |
| | (0 - 60) | (61 - 84) | (85 - 94) | (95 - 100) | |

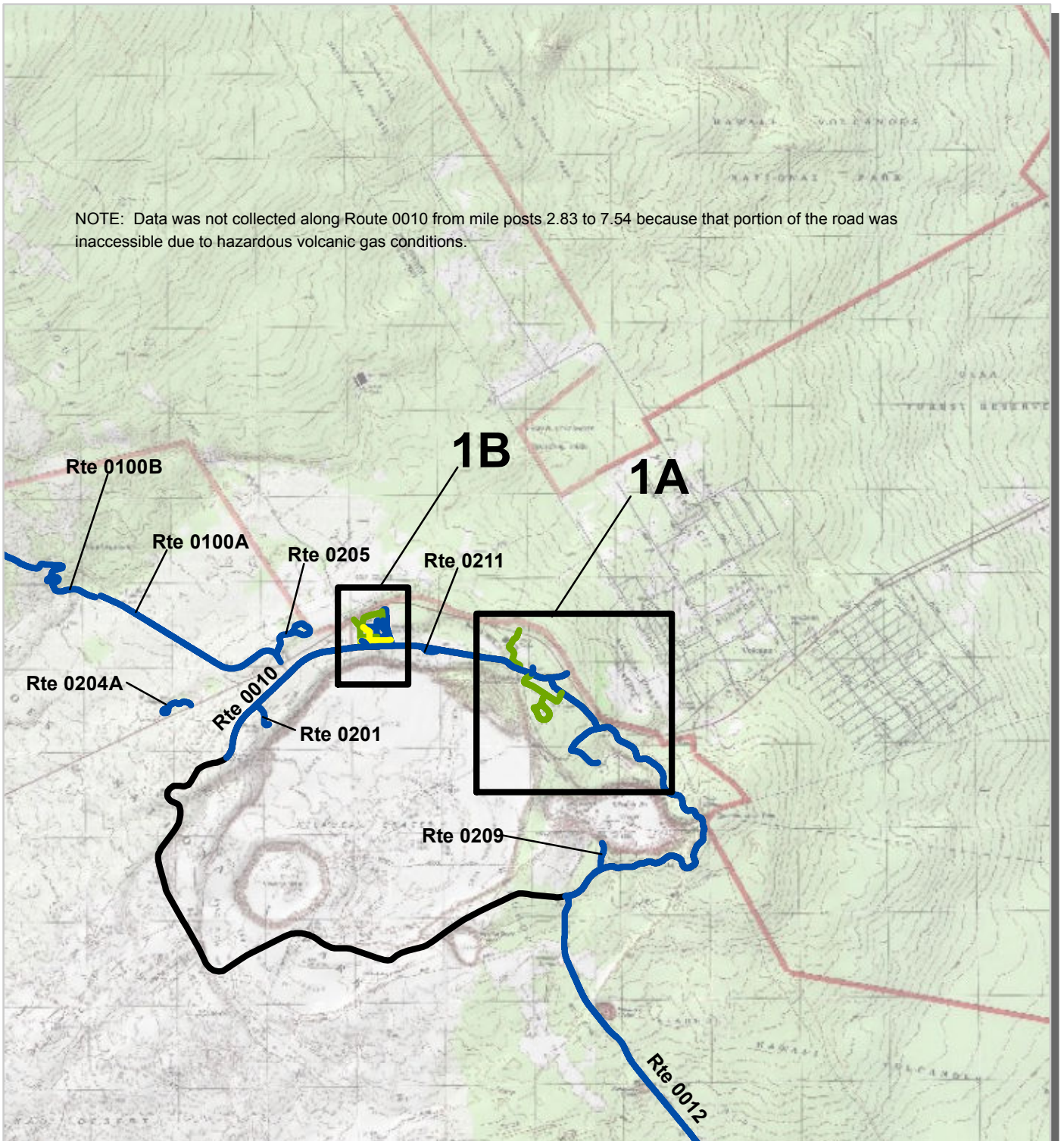
* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

Note: Only routes collected by the DCV in Cycle-5 are displayed.



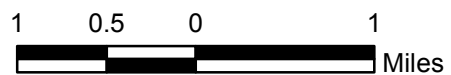
Hawaii Volcano National Park Route Condition Map PCR - Mile by Mile Area 1

NOTE: Data was not collected along Route 0010 from mile posts 2.83 to 7.54 because that portion of the road was inaccessible due to hazardous volcanic gas conditions.

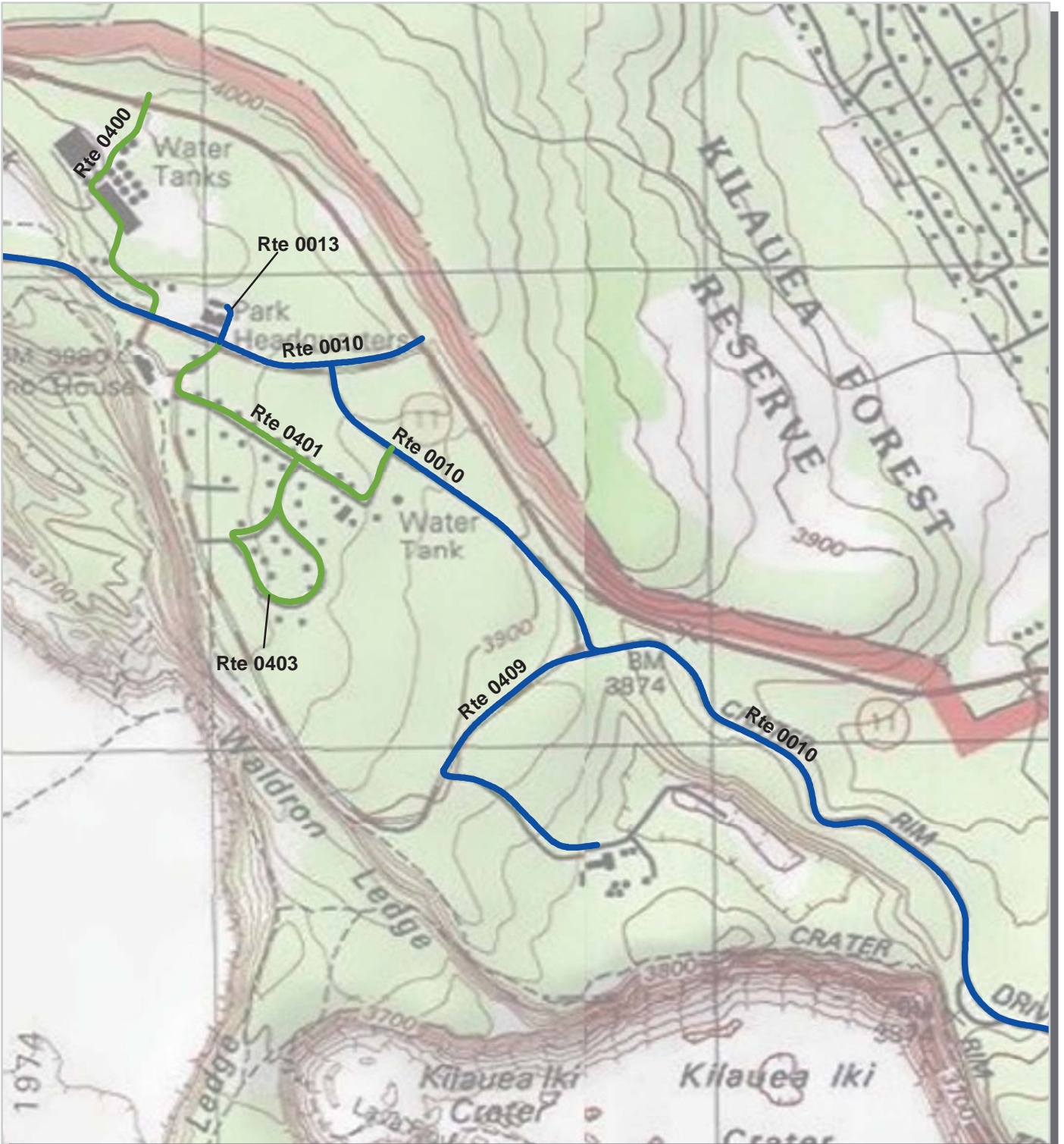


| | | | | | | | | | | |
|-----|----------|--|-----------|---|------------|---|-----------|---|---------|--|
| PCR | Poor | | Fair | | Good | | Excellent | | No Data | |
| | (0 - 60) | | (61 - 84) | (85 - 94) | (95 - 100) | | | | | |

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

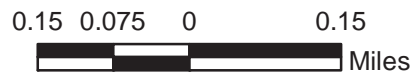


Hawaii Volcano National Park Route Condition Map PCR - Mile by Mile Area 1A

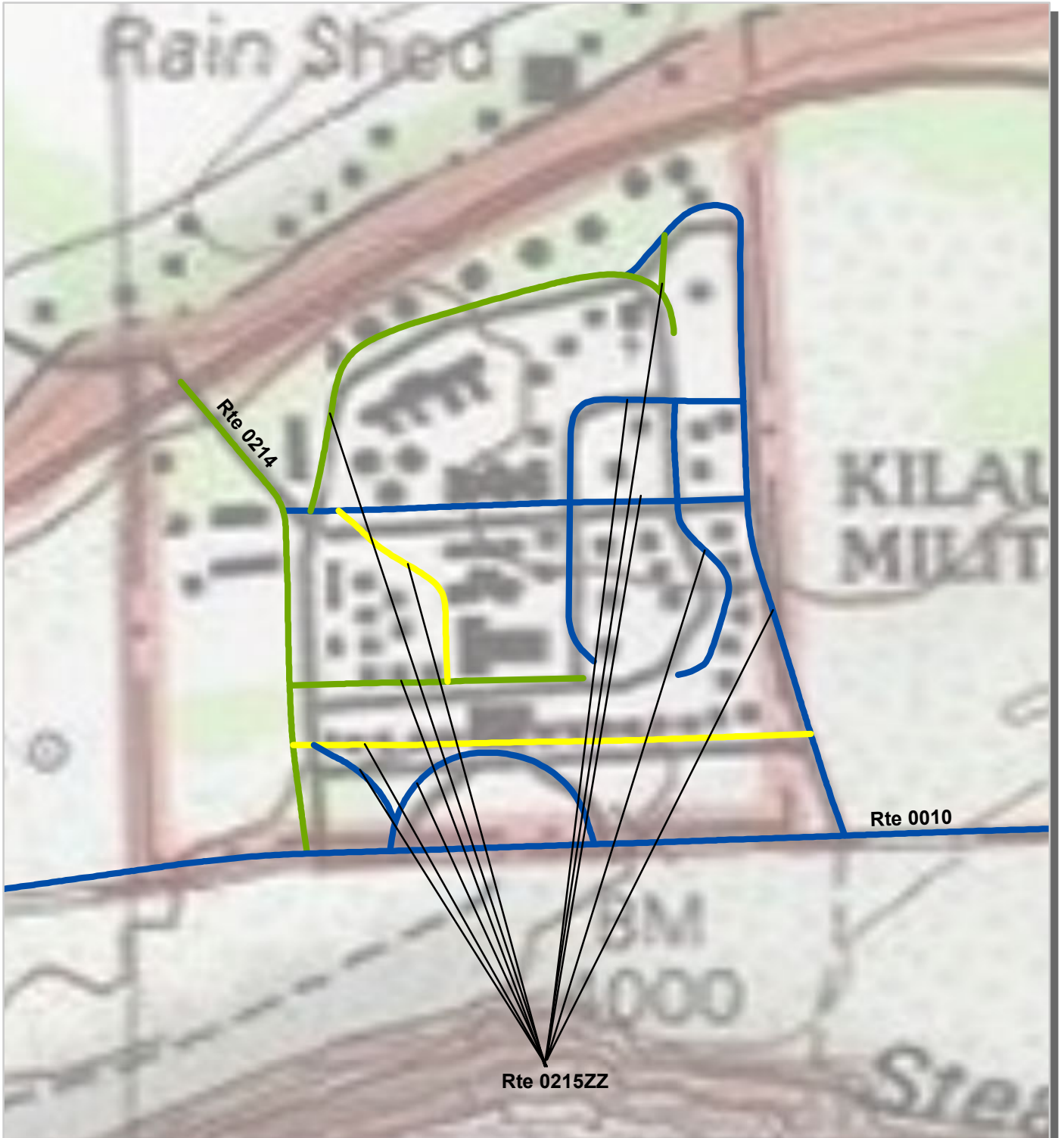


| | | | | | |
|-----|----------|-----------|-----------|------------|---------|
| PCR | Poor | Fair | Good | Excellent | No Data |
| | (0 - 60) | (61 - 84) | (85 - 94) | (95 - 100) | |

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

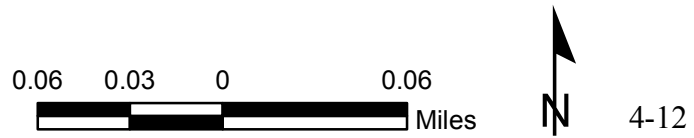


Hawaii Volcano National Park
 Route Condition Map
 PCR - Mile by Mile
 Area 1B

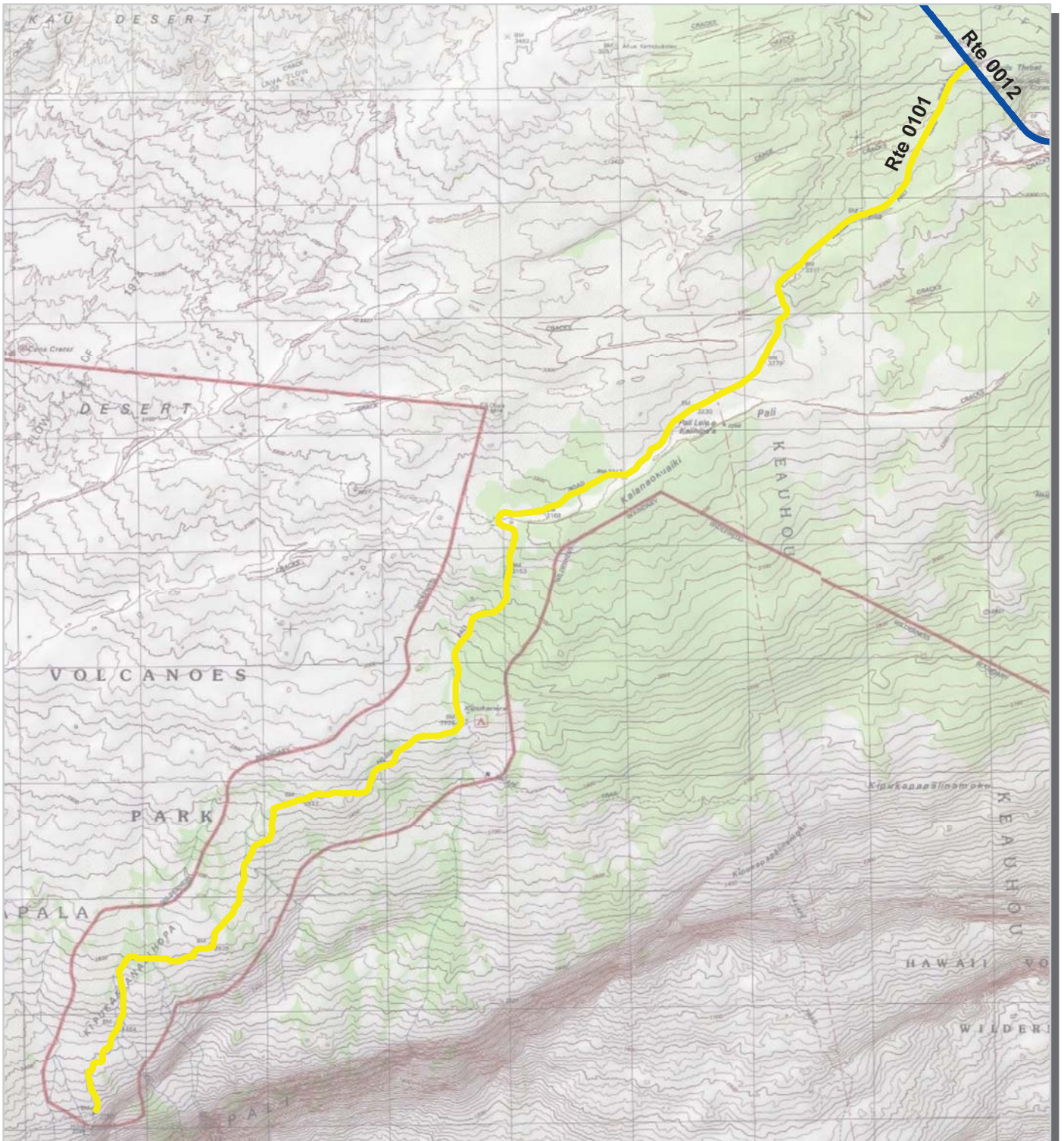


| | | | | | | | | | | |
|-----|----------|------------------------------------|-----------|---------------------------------------|------------|--------------------------------------|-----------|-------------------------------------|---------|--------------------------------------|
| PCR | Poor | ■ | Fair | ■ | Good | ■ | Excellent | ■ | No Data | ■ |
| | (0 - 60) | | (61 - 84) | (85 - 94) | (95 - 100) | | | | | |

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.



Hawaii Volcano National Park Route Condition Map PCR - Mile by Mile Area 2

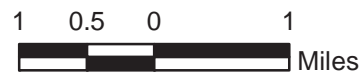
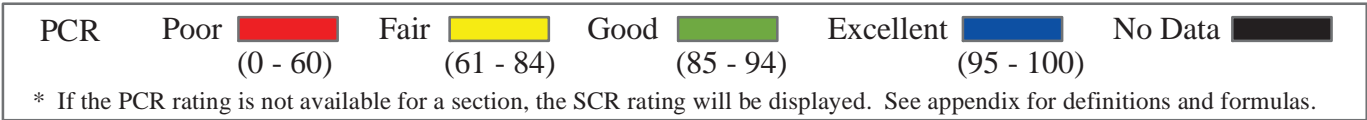
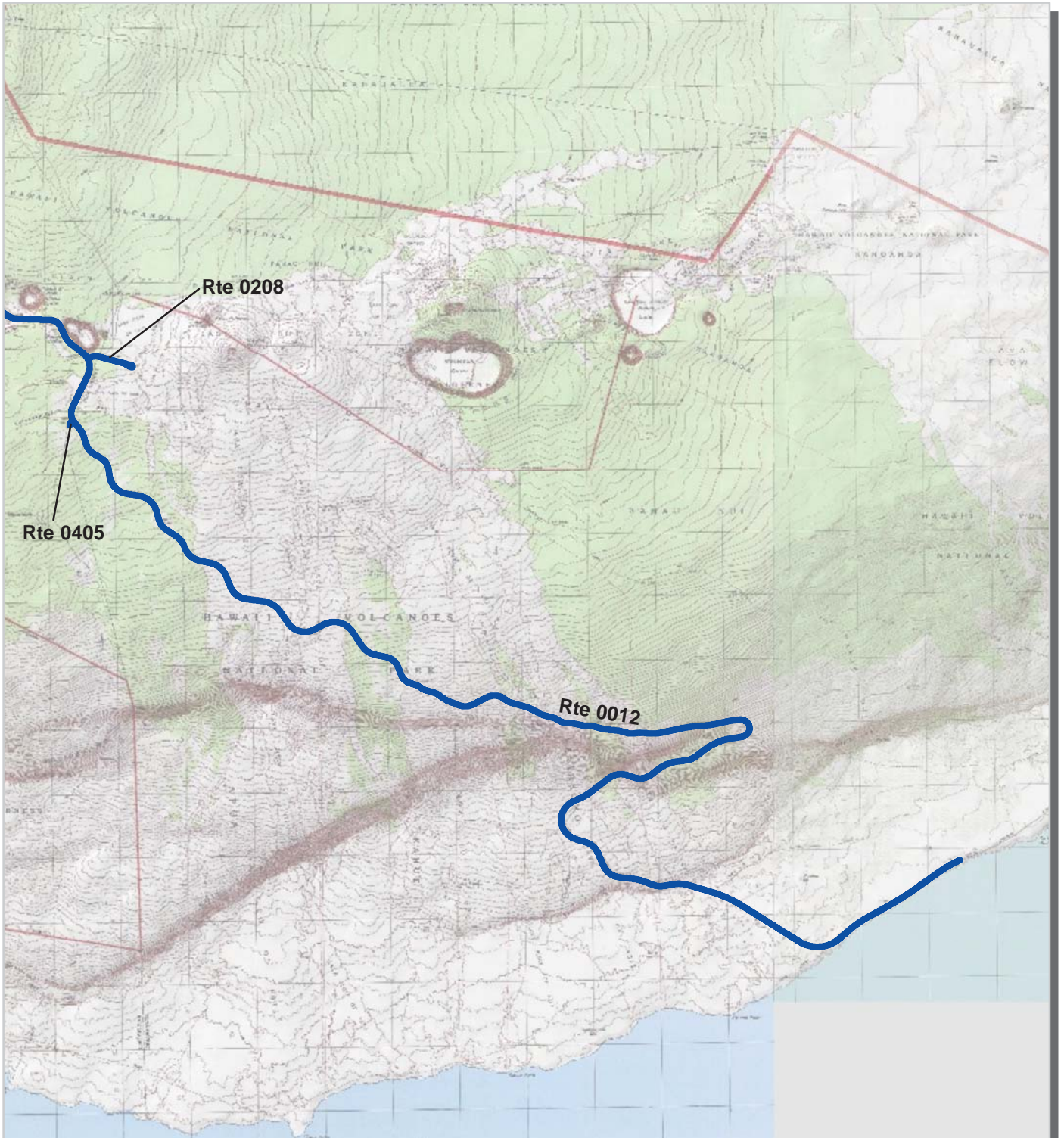


| | | | | | |
|-----|----------|-----------|-----------|------------|---------|
| PCR | Poor | Fair | Good | Excellent | No Data |
| | (0 - 60) | (61 - 84) | (85 - 94) | (95 - 100) | |

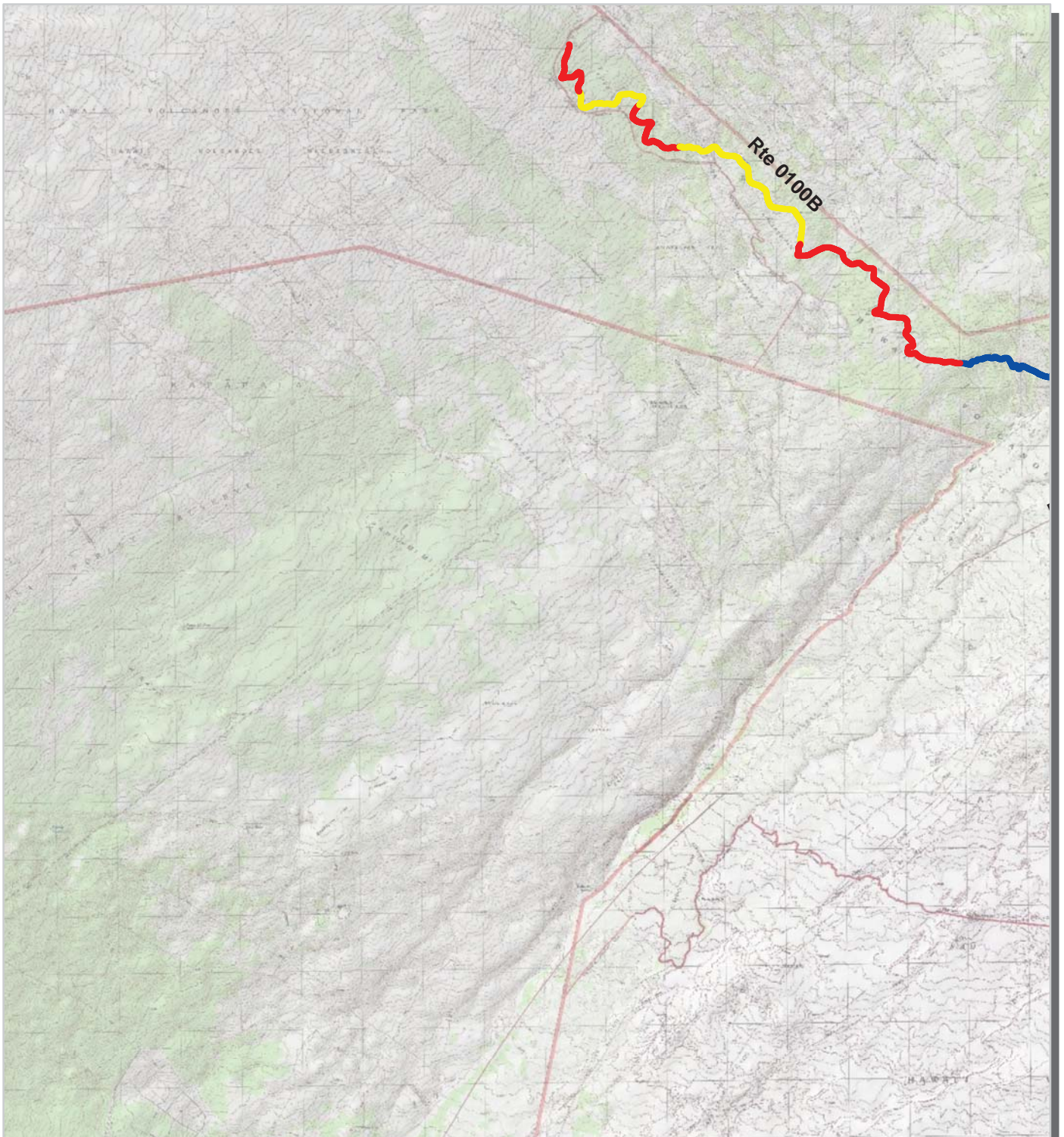
* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.



Hawaii Volcano National Park Route Condition Map PCR - Mile by Mile Area 3



Hawaii Volcano National Park Route Condition Map PCR - Mile by Mile Area 4



| | | | | | |
|-----|----------|-----------|-----------|------------|---------|
| PCR | Poor | Fair | Good | Excellent | No Data |
| | (0 - 60) | (61 - 84) | (85 - 94) | (95 - 100) | |

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.



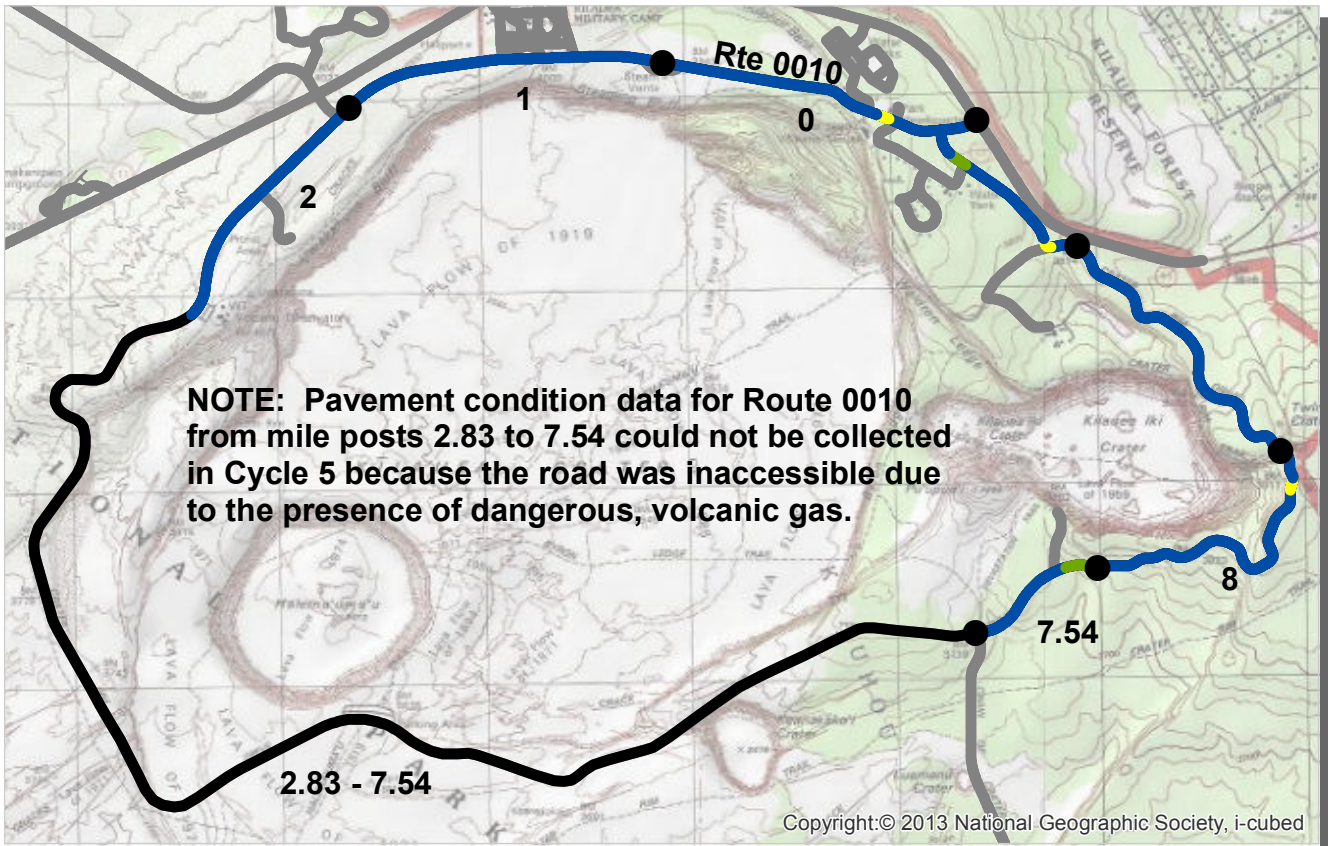
Section 5
Paved Route
Condition Rating Sheets



Hawaii Volcanoes National Park



Federal Lands Highway
Road Inventory Program



| | | | | | |
|-----|----------|-----------|-----------|------------|---------|
| PCR | Poor | Fair | Good | Excellent | No Data |
| | (0 - 60) | (61 - 84) | (85 - 94) | (95 - 100) | |

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0010 CRATER RIM DRIVE
HAVO : HAWAII VOLCANOES NATIONAL PARK

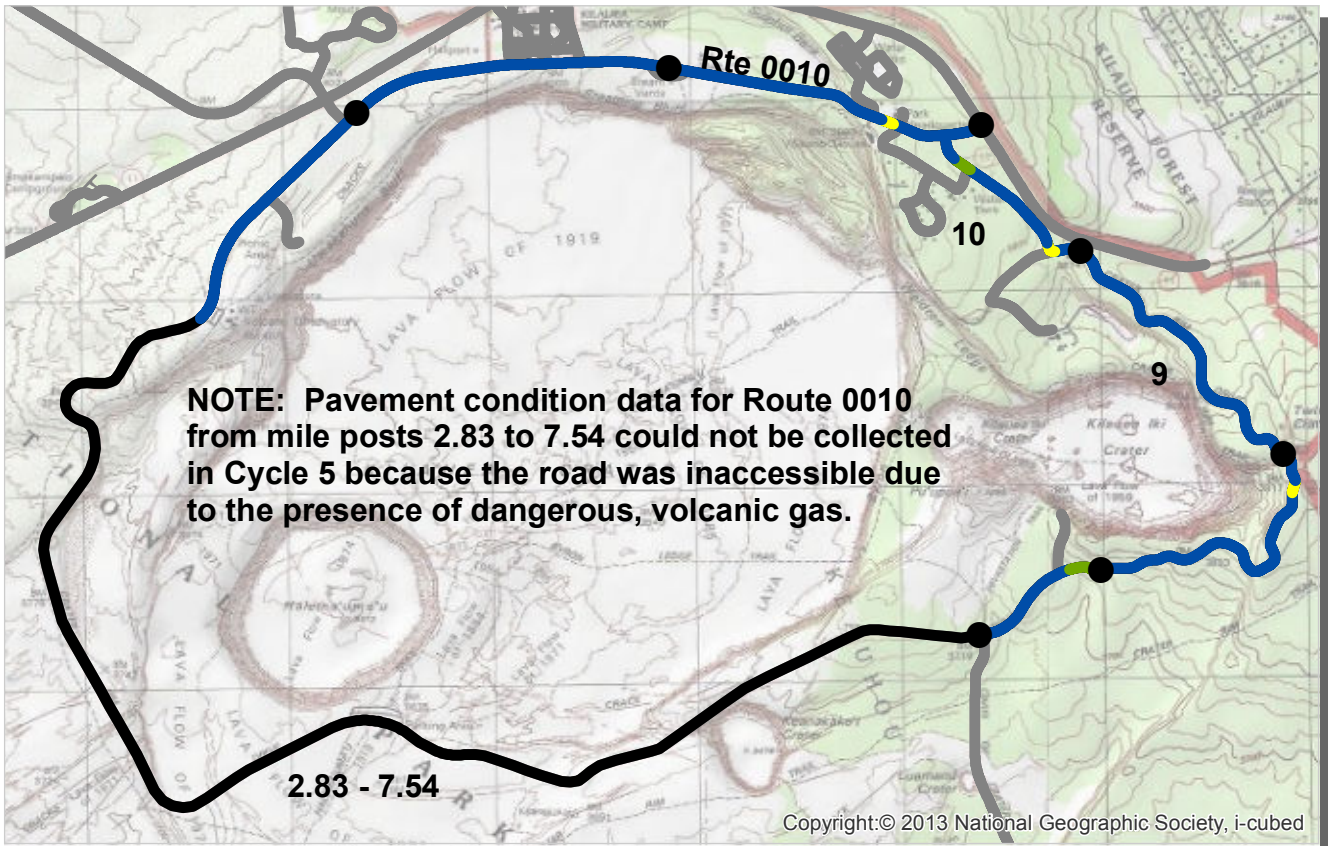
COLLECTED: 4/21/2014
TOTAL LENGTH: 10.60 Miles

| PACIFIC WEST REGION | COLLECTED: 4/21/2014 | | | | |
|--------------------------------------|-----------------------------|------|------|------|------|
| Section Number | 0 | 1 | 2 | 7.54 | 8 |
| Section Length (mi) | 1.00 | 1.00 | 0.83 | 0.46 | 1.00 |
| Cross Section Information | | | | | |
| Number of Lanes | 2 | 2 | 2 | 2 | 2 |
| Paved Width (ft) | 28 | 23 | 23 | 24 | 21 |
| Lane Width (ft) | 11 | 10 | 12 | 11 | 10 |
| Roadway Condition Information | | | | | |
| SCR (Surface Condition Rating) | 99 | 100 | 100 | 100 | 99 |
| PCR (Pavement Condition Rating) | 99 | 100 | 100 | 98 | 99 |
| Distress Index Values | | | | | |
| Structural Crack Index | 100 | 100 | 100 | 100 | 100 |
| Transverse Cracking Index | 100 | 100 | 100 | 100 | 100 |
| Patching Index | 100 | 100 | 100 | 100 | 100 |
| Rutting Index | 99 | 100 | 100 | 100 | 99 |
| Roughness Condition Index (RCI) | 100 | 100 | 100 | 96 | 98 |

NOTES:
 Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.
 See Section 10 for explanation of SCR, PCR, & all Distress Index Values.
 NC - Not Collected N/A - Not Applicable



ROUTE: 0010 CRATER RIM DRIVE



PCR Poor ■ Fair ■ Good ■ Excellent ■ No Data ■
 (0 - 60) (61 - 84) (85 - 94) (95 - 100)

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0010 CRATER RIM DRIVE
HAVO : HAWAII VOLCANOES NATIONAL PARK

COLLECTED: 4/21/2014
TOTAL LENGTH: 10.60 Miles

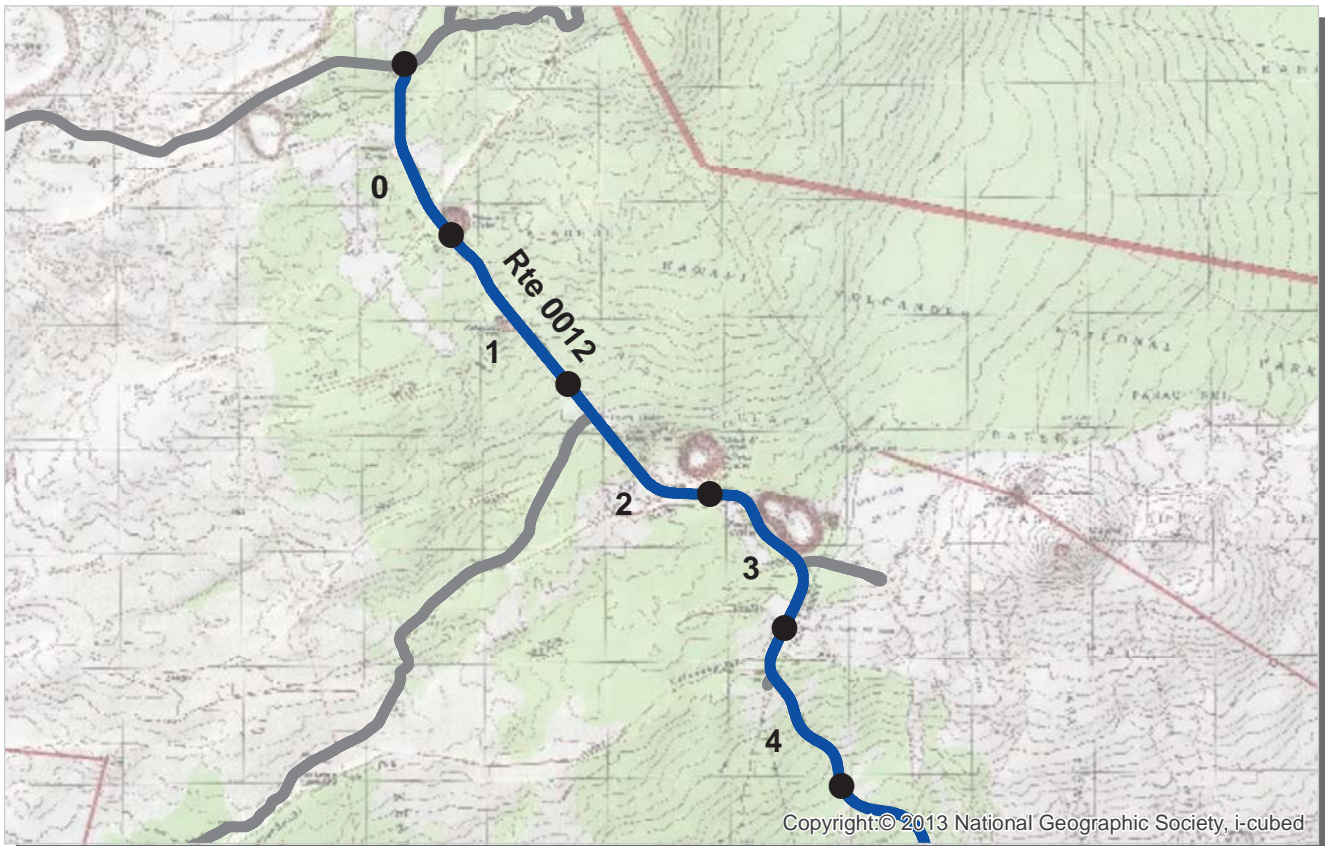
PACIFIC WEST REGION

| <i>Section Number</i> | 9 | 10 | | | |
|--------------------------------------|------|------|--|--|--|
| <i>Section Length (mi)</i> | 1.00 | 0.60 | | | |
| <i>Cross Section Information</i> | | | | | |
| Number of Lanes | 2 | 2 | | | |
| Paved Width (ft) | 23 | 25 | | | |
| Lane Width (ft) | 10 | 11 | | | |
| <i>Roadway Condition Information</i> | | | | | |
| SCR (Surface Condition Rating) | 99 | 100 | | | |
| PCR (Pavement Condition Rating) | 99 | 99 | | | |
| <i>Distress Index Values</i> | | | | | |
| Structural Crack Index | 100 | 100 | | | |
| Transverse Cracking Index | 100 | 100 | | | |
| Patching Index | 100 | 100 | | | |
| Rutting Index | 99 | 100 | | | |
| Roughness Condition Index (RCI) | 100 | 97 | | | |

NOTES:
 Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.
 See Section 10 for explanation of SCR, PCR, & all Distress Index Values.
 NC - Not Collected N/A - Not Applicable



ROUTE: 0010 CRATER RIM DRIVE



| | | | | | |
|-----|----------|-----------|-----------|------------|---------|
| PCR | Poor | Fair | Good | Excellent | No Data |
| | (0 - 60) | (61 - 84) | (85 - 94) | (95 - 100) | |

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0012 CHAIN OF CRATERS ROAD
HAVO : HAWAII VOLCANOES NATIONAL PARK

COLLECTED: 4/21/2014
TOTAL LENGTH: 18.56 Miles

PACIFIC WEST REGION

| <i>Section Number</i> | 0 | 1 | 2 | 3 | 4 |
|--------------------------------------|------|------|------|------|------|
| <i>Section Length (mi)</i> | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| <i>Cross Section Information</i> | | | | | |
| Number of Lanes | 2 | 2 | 2 | 2 | 2 |
| Paved Width (ft) | 22 | 22 | 22 | 23 | 24 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 |
| <i>Roadway Condition Information</i> | | | | | |
| SCR (Surface Condition Rating) | 100 | 100 | 100 | 100 | 100 |
| PCR (Pavement Condition Rating) | 100 | 100 | 100 | 100 | 100 |
| <i>Distress Index Values</i> | | | | | |
| Structural Crack Index | 100 | 100 | 100 | 100 | 100 |
| Transverse Cracking Index | 100 | 100 | 100 | 100 | 100 |
| Patching Index | 100 | 100 | 100 | 100 | 100 |
| Rutting Index | 100 | 100 | 100 | 100 | 100 |
| Roughness Condition Index (RCI) | 100 | 100 | 100 | 100 | 100 |

NOTES:

Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.
 See Section 10 for explanation of SCR, PCR, & all Distress Index Values.

NC - Not Collected N/A - Not Applicable



ROUTE: 0012 CHAIN OF CRATERS ROAD



| | | | | | |
|-----|----------|-----------|-----------|------------|---------|
| PCR | Poor | Fair | Good | Excellent | No Data |
| | (0 - 60) | (61 - 84) | (85 - 94) | (95 - 100) | |

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0012 CHAIN OF CRATERS ROAD
HAVO : HAWAII VOLCANOES NATIONAL PARK

COLLECTED: 4/21/2014
TOTAL LENGTH: 18.56 Miles

PACIFIC WEST REGION

| <i>Section Number</i> | 5 | 6 | 7 | 8 | 9 |
|--------------------------------------|------|------|------|------|------|
| <i>Section Length (mi)</i> | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| <i>Cross Section Information</i> | | | | | |
| Number of Lanes | 2 | 2 | 2 | 2 | 2 |
| Paved Width (ft) | 24 | 24 | 23 | 22 | 23 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 |
| <i>Roadway Condition Information</i> | | | | | |
| SCR (Surface Condition Rating) | 100 | 100 | 100 | 99 | 100 |
| PCR (Pavement Condition Rating) | 100 | 100 | 100 | 99 | 100 |
| <i>Distress Index Values</i> | | | | | |
| Structural Crack Index | 100 | 100 | 100 | 100 | 100 |
| Transverse Cracking Index | 100 | 100 | 100 | 100 | 100 |
| Patching Index | 100 | 100 | 100 | 100 | 100 |
| Rutting Index | 100 | 100 | 100 | 99 | 100 |
| Roughness Condition Index (RCI) | 100 | 100 | 100 | 100 | 100 |

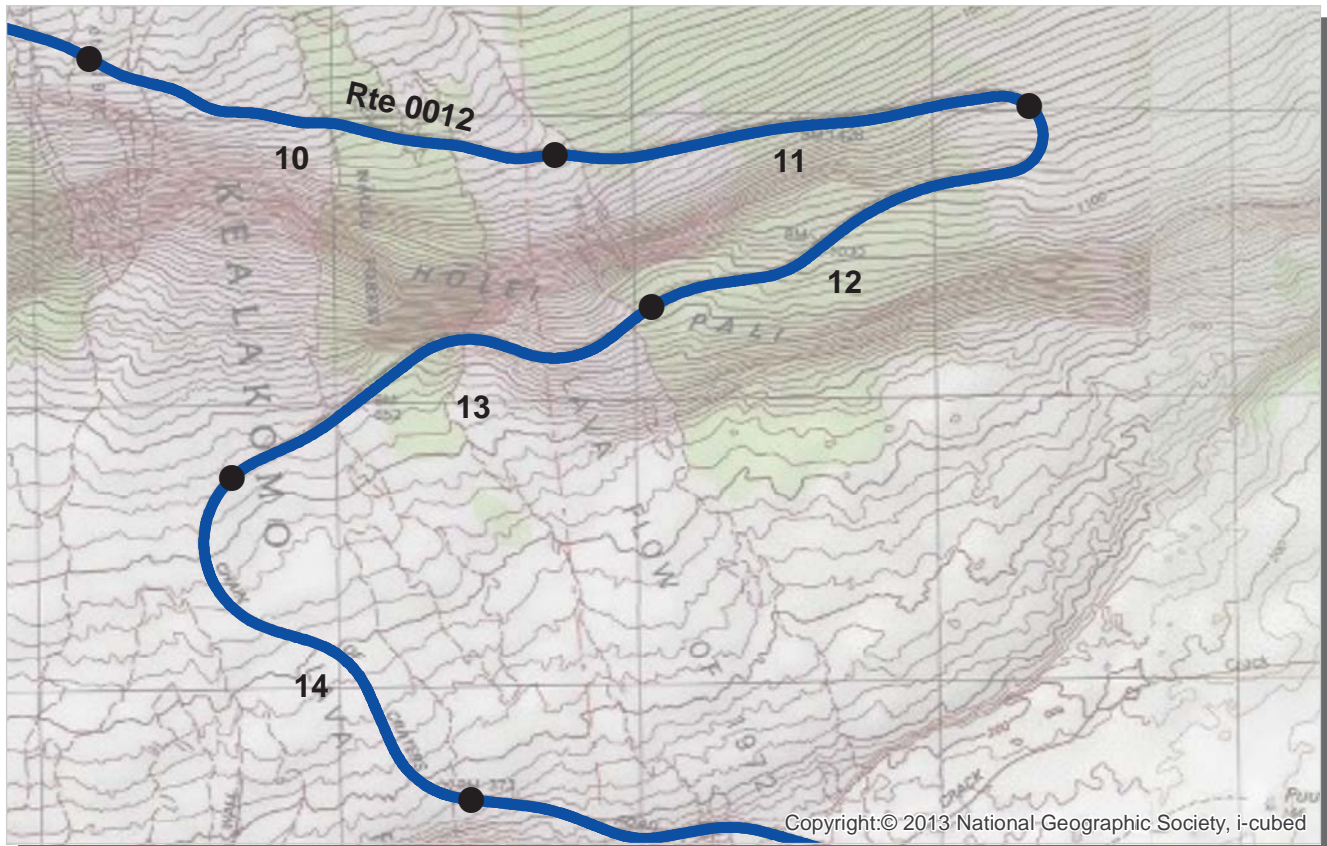
NOTES:

Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.

See Section 10 for explanation of SCR, PCR, & all Distress Index Values.

NC - Not Collected N/A - Not Applicable

ROUTE: 0012 CHAIN OF CRATERS ROAD



PCR Poor ■ Fair ■ Good ■ Excellent ■ No Data ■
 (0 - 60) (61 - 84) (85 - 94) (95 - 100)

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0012 CHAIN OF CRATERS ROAD
HAVO : HAWAII VOLCANOES NATIONAL PARK

COLLECTED: 4/21/2014
TOTAL LENGTH: 18.56 Miles

PACIFIC WEST REGION

| <i>Section Number</i> | 10 | 11 | 12 | 13 | 14 |
|--------------------------------------|------|------|------|------|------|
| <i>Section Length (mi)</i> | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| <i>Cross Section Information</i> | | | | | |
| Number of Lanes | 2 | 2 | 2 | 2 | 2 |
| Paved Width (ft) | 24 | 22 | 22 | 22 | 23 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 |
| <i>Roadway Condition Information</i> | | | | | |
| SCR (Surface Condition Rating) | 100 | 100 | 100 | 100 | 100 |
| PCR (Pavement Condition Rating) | 100 | 100 | 100 | 100 | 100 |
| <i>Distress Index Values</i> | | | | | |
| Structural Crack Index | 100 | 100 | 100 | 100 | 100 |
| Transverse Cracking Index | 100 | 100 | 100 | 100 | 100 |
| Patching Index | 100 | 100 | 100 | 100 | 100 |
| Rutting Index | 100 | 100 | 100 | 100 | 100 |
| Roughness Condition Index (RCI) | 100 | 100 | 100 | 100 | 100 |

NOTES:

Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.

See Section 10 for explanation of SCR, PCR, & all Distress Index Values.

NC - Not Collected N/A - Not Applicable



ROUTE: 0012 CHAIN OF CRATERS ROAD



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| | | | | | |
|-----|----------|-----------|-----------|------------|---------|
| PCR | Poor | Fair | Good | Excellent | No Data |
| | (0 - 60) | (61 - 84) | (85 - 94) | (95 - 100) | |

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0012 CHAIN OF CRATERS ROAD
HAVO : HAWAII VOLCANOES NATIONAL PARK

COLLECTED: 4/21/2014
TOTAL LENGTH: 18.56 Miles

PACIFIC WEST REGION

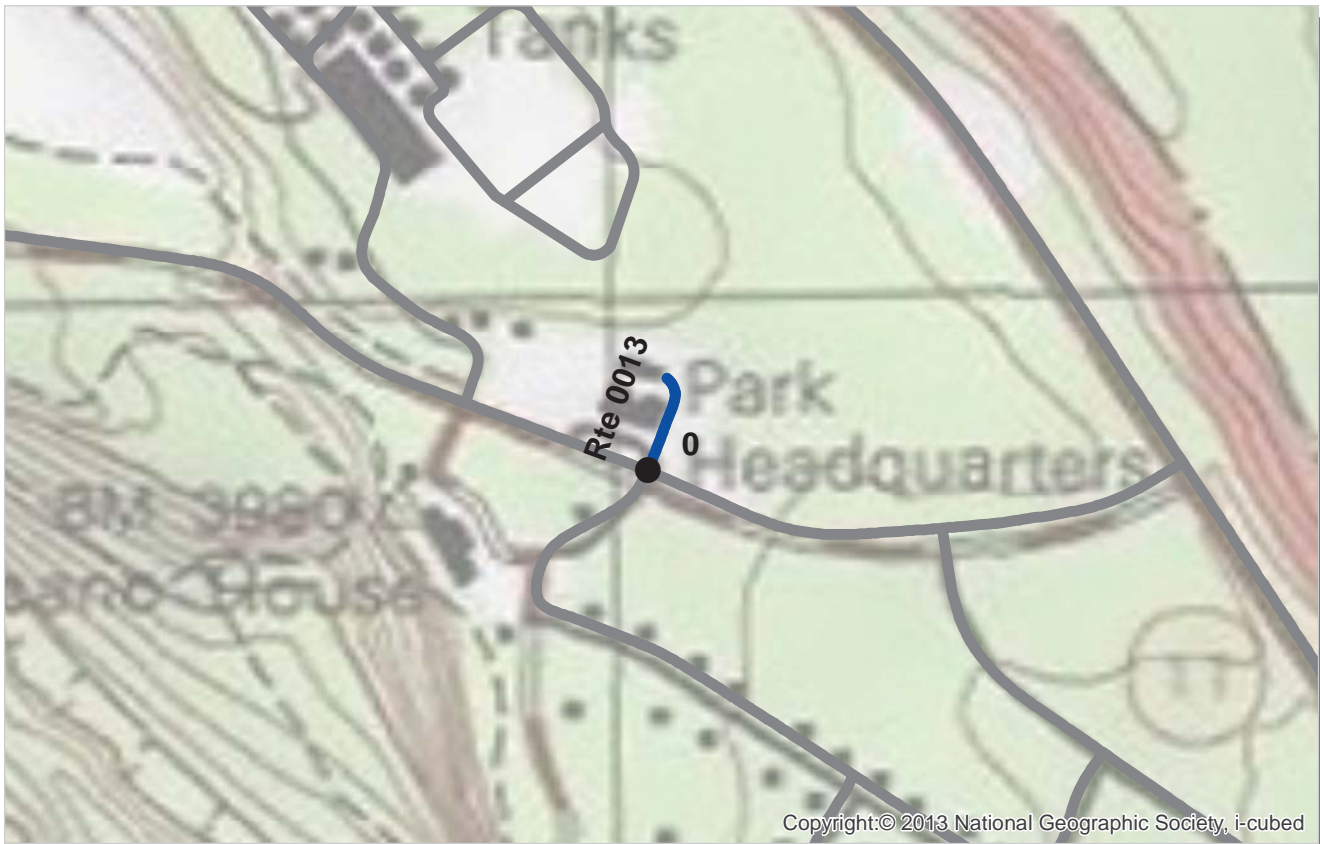
| <i>Section Number</i> | 15 | 16 | 17 | 18 | |
|--------------------------------------|------|------|------|------|--|
| <i>Section Length (mi)</i> | 1.00 | 1.00 | 1.00 | 0.56 | |
| <i>Cross Section Information</i> | | | | | |
| Number of Lanes | 2 | 2 | 2 | 2 | |
| Paved Width (ft) | 22 | 21 | 21 | 20 | |
| Lane Width (ft) | 10 | 10 | 10 | 9 | |
| <i>Roadway Condition Information</i> | | | | | |
| SCR (Surface Condition Rating) | 100 | 100 | 100 | 100 | |
| PCR (Pavement Condition Rating) | 100 | 100 | 100 | 100 | |
| <i>Distress Index Values</i> | | | | | |
| Structural Crack Index | 100 | 100 | 100 | 100 | |
| Transverse Cracking Index | 100 | 100 | 100 | 100 | |
| Patching Index | 100 | 100 | 100 | 100 | |
| Rutting Index | 100 | 100 | 100 | 100 | |
| Roughness Condition Index (RCI) | 100 | 100 | 100 | 100 | |

NOTES:

Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.
 See Section 10 for explanation of SCR, PCR, & all Distress Index Values.

NC - Not Collected N/A - Not Applicable

ROUTE: 0012 CHAIN OF CRATERS ROAD



| | | | | | |
|-----|----------|-----------|-----------|------------|---------|
| PCR | Poor | Fair | Good | Excellent | No Data |
| | (0 - 60) | (61 - 84) | (85 - 94) | (95 - 100) | |

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0013 OFFICE AREA STREET
HAVO : HAWAII VOLCANOES NATIONAL PARK

COLLECTED: 4/19/2014
TOTAL LENGTH: 0.05 Miles

PACIFIC WEST REGION

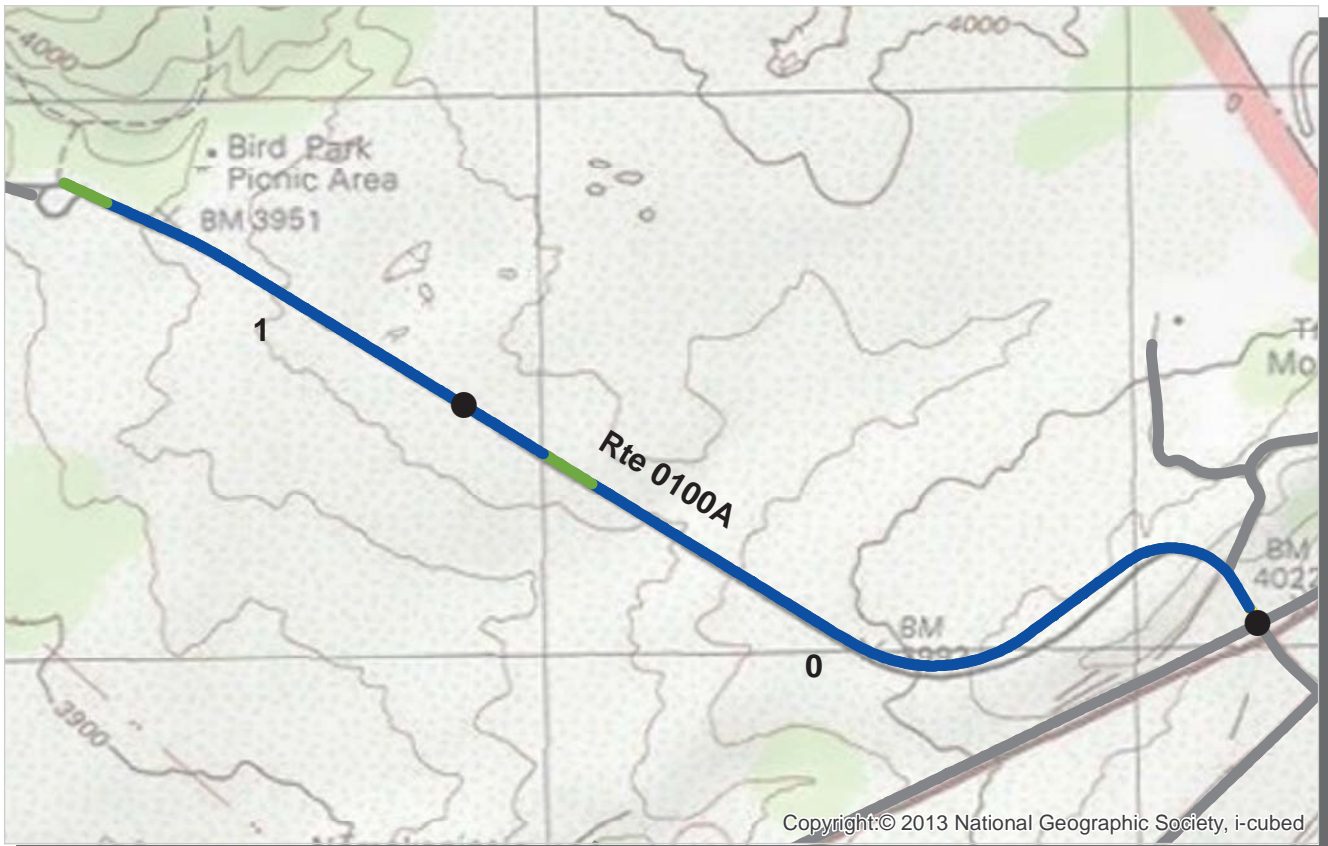
| | | | | | |
|--------------------------------------|------|--|--|--|--|
| <i>Section Number</i> | 0 | | | | |
| <i>Section Length (mi)</i> | 0.05 | | | | |
| <i>Cross Section Information</i> | | | | | |
| Number of Lanes | 2 | | | | |
| Paved Width (ft) | 18 | | | | |
| Lane Width (ft) | 9 | | | | |
| <i>Roadway Condition Information</i> | | | | | |
| SCR (Surface Condition Rating) | 97 | | | | |
| PCR (Pavement Condition Rating) | 97 | | | | |
| <i>Distress Index Values</i> | | | | | |
| Structural Crack Index | 100 | | | | |
| Transverse Cracking Index | 100 | | | | |
| Patching Index | 100 | | | | |
| Rutting Index | 97 | | | | |
| Roughness Condition Index (RCI) | NC | | | | |

NOTES:

Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.
 See Section 10 for explanation of SCR, PCR, & all Distress Index Values.

NC - Not Collected N/A - Not Applicable

ROUTE: 0013 OFFICE AREA STREET



| | | | | | |
|-----|----------|-----------|-----------|------------|---------|
| PCR | Poor | Fair | Good | Excellent | No Data |
| | (0 - 60) | (61 - 84) | (85 - 94) | (95 - 100) | |

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0100A MAUNA LOA ROAD
HAVO : HAWAII VOLCANOES NATIONAL PARK

COLLECTED: 4/20/2014
TOTAL LENGTH: 1.49 Miles

PACIFIC WEST REGION

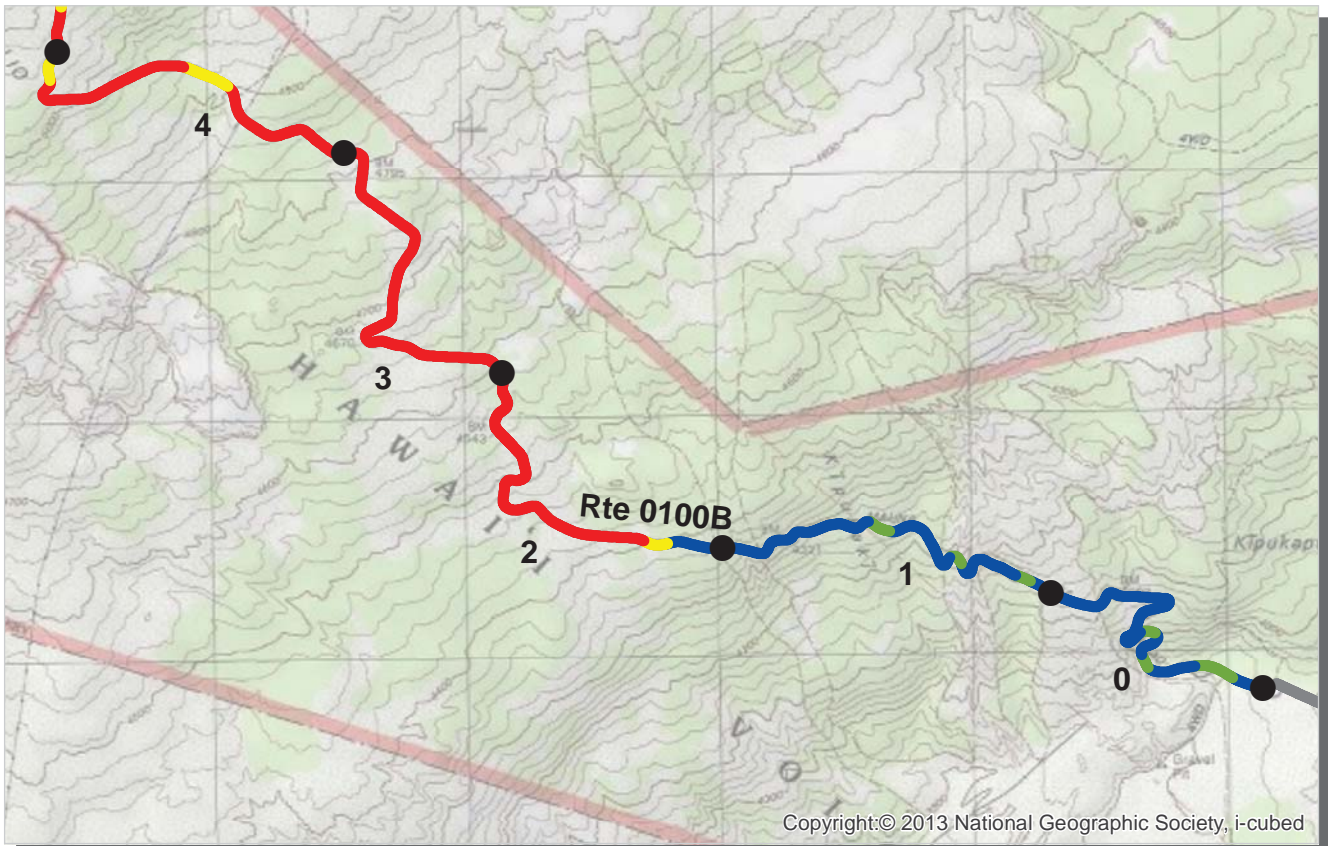
| Section Number | 0 | 1 | | | |
|--------------------------------------|------|------|--|--|--|
| Section Length (mi) | 1.00 | 0.49 | | | |
| Cross Section Information | | | | | |
| Number of Lanes | 2 | 2 | | | |
| Paved Width (ft) | 20 | 20 | | | |
| Lane Width (ft) | 10 | 10 | | | |
| Roadway Condition Information | | | | | |
| SCR (Surface Condition Rating) | 100 | 99 | | | |
| PCR (Pavement Condition Rating) | 98 | 97 | | | |
| Distress Index Values | | | | | |
| Structural Crack Index | 100 | 100 | | | |
| Transverse Cracking Index | 100 | 100 | | | |
| Patching Index | 100 | 100 | | | |
| Rutting Index | 100 | 99 | | | |
| Roughness Condition Index (RCI) | 95 | 95 | | | |

NOTES:

Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.
 See Section 10 for explanation of SCR, PCR, & all Distress Index Values.

NC - Not Collected N/A - Not Applicable

ROUTE: 0100A MAUNA LOA ROAD



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| | | | | | |
|-----|----------|-----------|-----------|------------|---------|
| PCR | Poor | Fair | Good | Excellent | No Data |
| | (0 - 60) | (61 - 84) | (85 - 94) | (95 - 100) | |

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0100B MAUNA LOA LOOKOUT ROAD
HAVO : HAWAII VOLCANOES NATIONAL PARK

COLLECTED: 4/20/2014
TOTAL LENGTH: 9.81 Miles

PACIFIC WEST REGION

| Section Number | 0 | 1 | 2 | 3 | 4 |
|--------------------------------------|------|------|------|------|------|
| Section Length (mi) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Cross Section Information | | | | | |
| Number of Lanes | 2 | 2 | 1 | 1 | 1 |
| Paved Width (ft) | 16 | 16 | 11 | 9 | 11 |
| Lane Width (ft) | 8 | 8 | 9 | 9 | 11 |
| Roadway Condition Information | | | | | |
| SCR (Surface Condition Rating) | 96 | 95 | 33 | 22 | 45 |
| PCR (Pavement Condition Rating) | 96 | 95 | 33 | 22 | 45 |
| Distress Index Values | | | | | |
| Structural Crack Index | 100 | 100 | 33 | 22 | 45 |
| Transverse Cracking Index | 100 | 100 | 71 | 69 | 67 |
| Patching Index | 100 | 100 | 100 | 100 | 100 |
| Rutting Index | 96 | 95 | 87 | 83 | 86 |
| Roughness Condition Index (RCI) | NC | NC | NC | NC | NC |

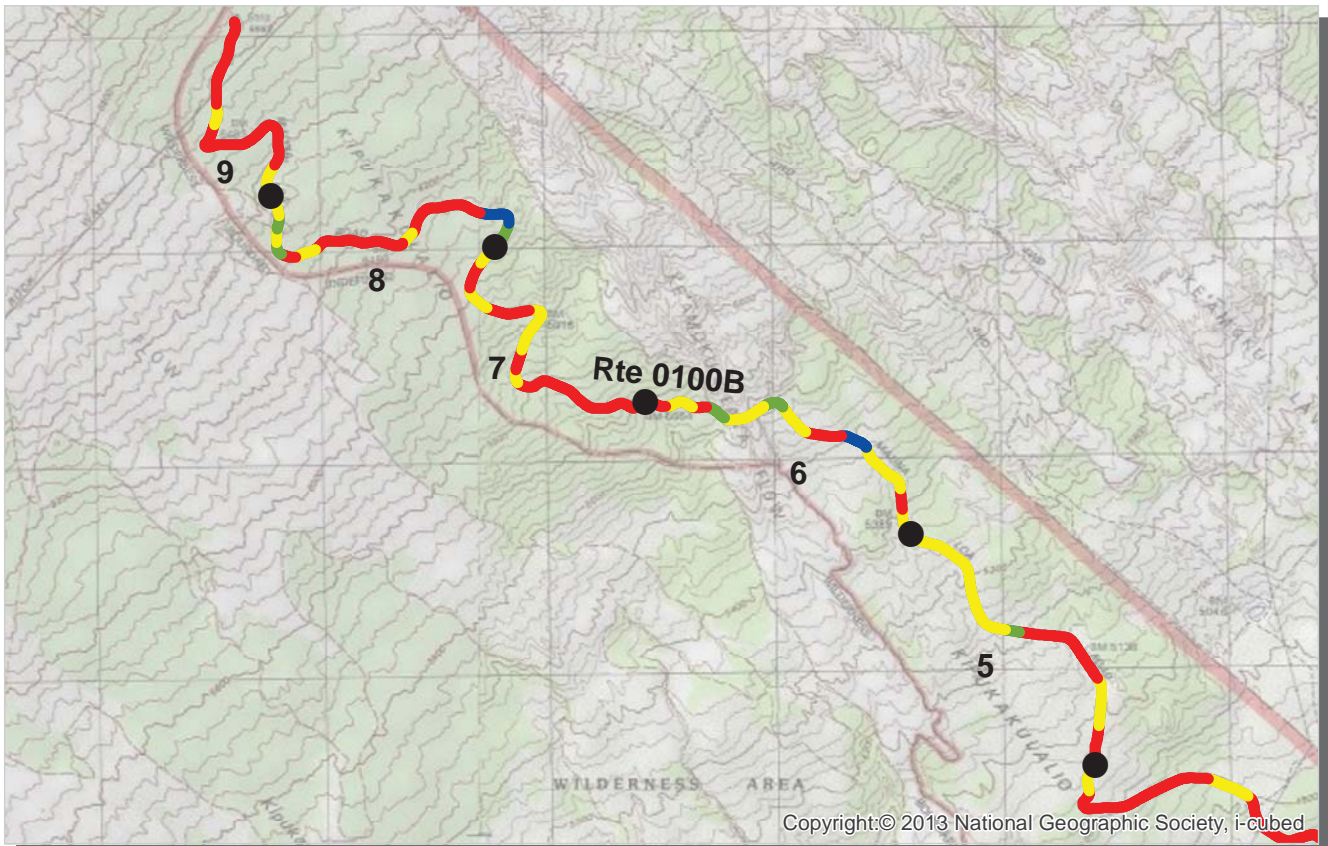
NOTES:

Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.

See Section 10 for explanation of SCR, PCR, & all Distress Index Values.

NC - Not Collected N/A - Not Applicable

ROUTE: 0100B MAUNA LOA LOOKOUT ROAD



| | | | | | |
|-----|----------|-----------|-----------|------------|---------|
| PCR | Poor | Fair | Good | Excellent | No Data |
| | (0 - 60) | (61 - 84) | (85 - 94) | (95 - 100) | |

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0100B MAUNA LOA LOOKOUT ROAD
HAVO : HAWAII VOLCANOES NATIONAL PARK

COLLECTED: 4/20/2014
TOTAL LENGTH: 9.81 Miles

PACIFIC WEST REGION

| <i>Section Number</i> | 5 | 6 | 7 | 8 | 9 |
|--------------------------------------|------|------|------|------|------|
| <i>Section Length (mi)</i> | 1.00 | 1.00 | 1.00 | 1.00 | 0.81 |
| <i>Cross Section Information</i> | | | | | |
| Number of Lanes | 1 | 1 | 1 | 1 | 1 |
| Paved Width (ft) | 11 | 10 | 10 | 10 | 11 |
| Lane Width (ft) | 11 | 10 | 10 | 10 | 11 |
| <i>Roadway Condition Information</i> | | | | | |
| SCR (Surface Condition Rating) | 72 | 73 | 60 | 62 | 50 |
| PCR (Pavement Condition Rating) | 72 | 73 | 60 | 62 | 50 |
| <i>Distress Index Values</i> | | | | | |
| Structural Crack Index | 72 | 91 | 71 | 83 | 85 |
| Transverse Cracking Index | 73 | 73 | 60 | 62 | 50 |
| Patching Index | 100 | 96 | 100 | 100 | 100 |
| Rutting Index | 87 | 92 | 80 | 85 | 88 |
| Roughness Condition Index (RCI) | NC | NC | NC | NC | NC |

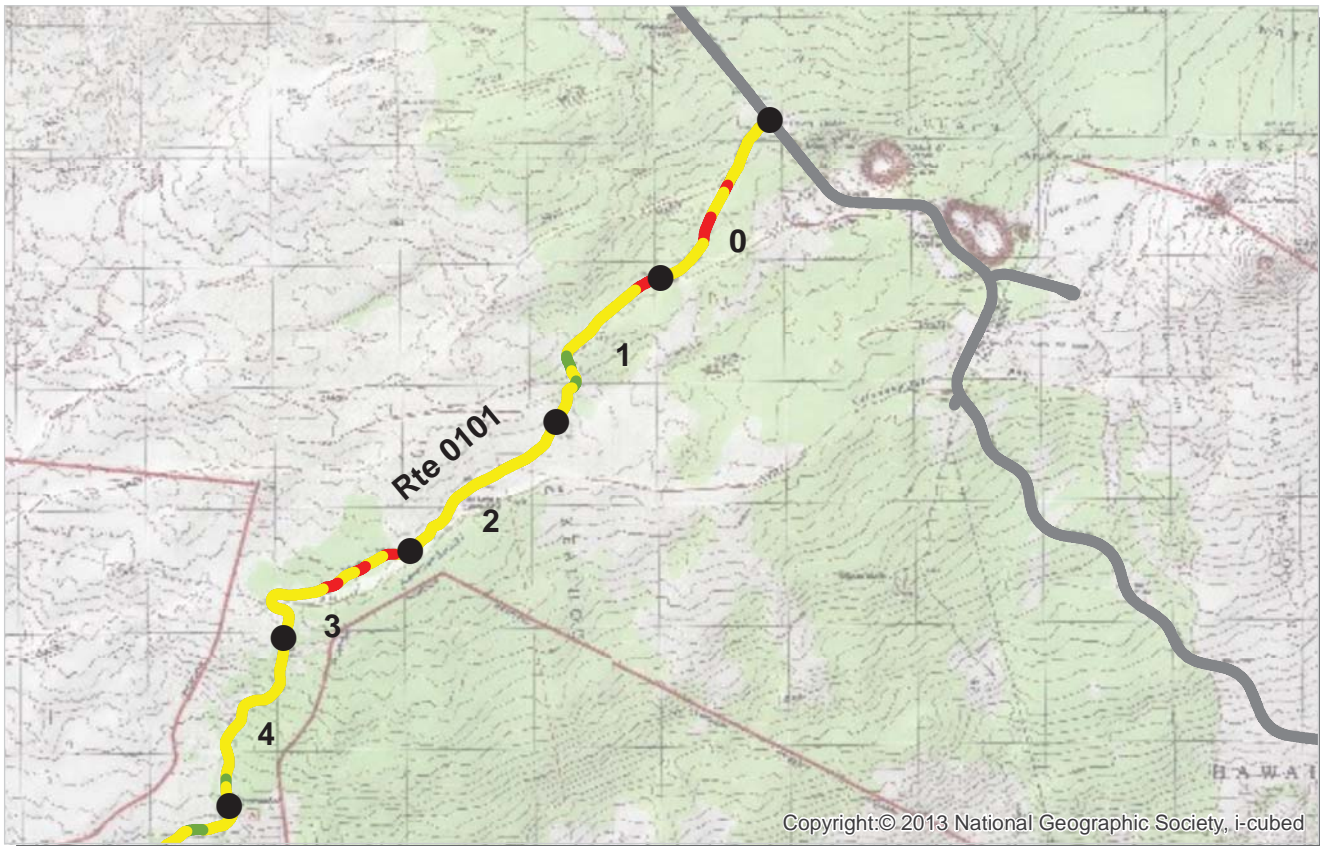
NOTES:

Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.
 See Section 10 for explanation of SCR, PCR, & all Distress Index Values.

NC - Not Collected N/A - Not Applicable



ROUTE: 0100B MAUNA LOA LOOKOUT ROAD



PCR Poor ■ Fair ■ Good ■ Excellent ■ No Data ■
 (0 - 60) (61 - 84) (85 - 94) (95 - 100)

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0101 HILINA PALI ROAD
HAVO : HAWAII VOLCANOES NATIONAL PARK

COLLECTED: 4/21/2014
TOTAL LENGTH: 8.50 Miles

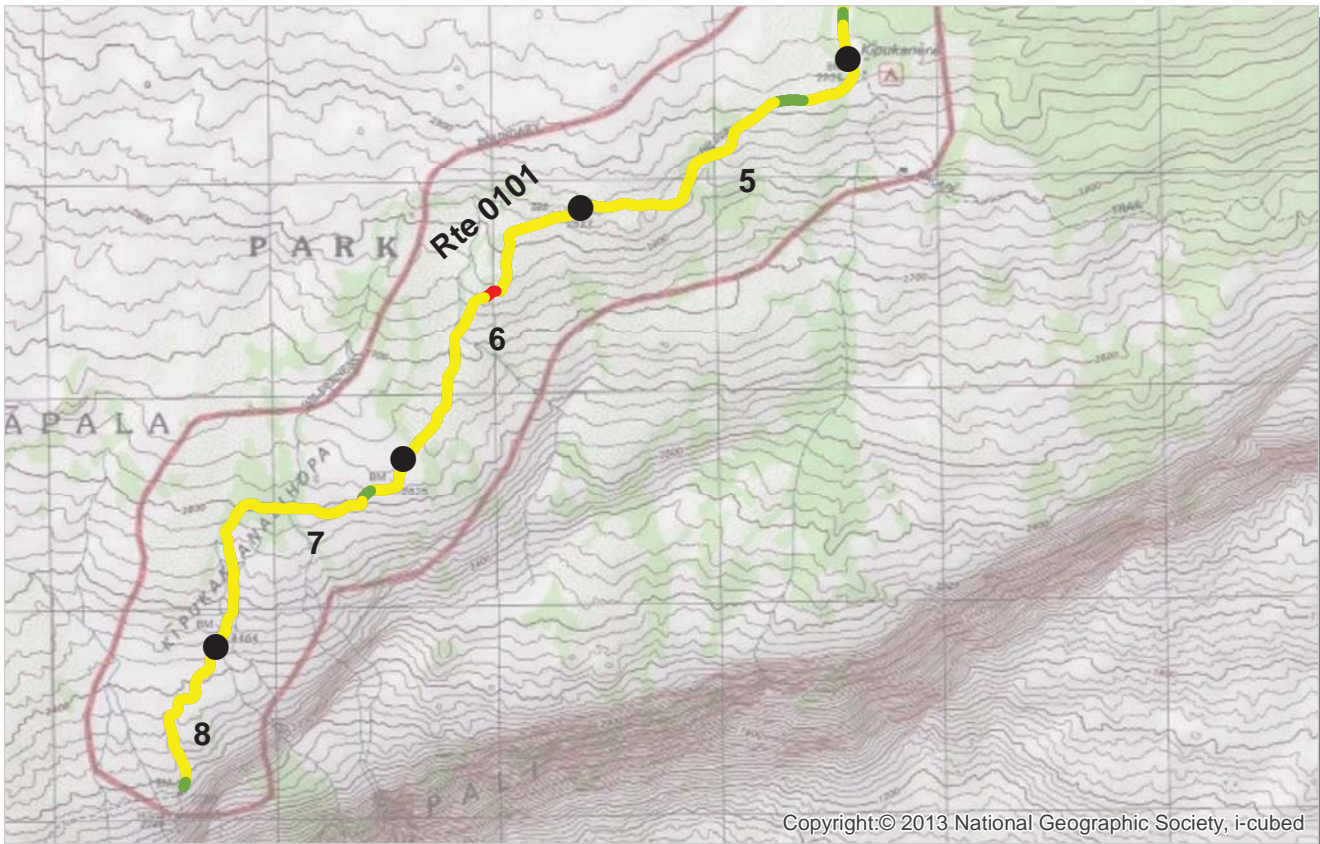
PACIFIC WEST REGION

| <i>Section Number</i> | 0 | 1 | 2 | 3 | 4 |
|--------------------------------------|------|------|------|------|------|
| <i>Section Length (mi)</i> | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| <i>Cross Section Information</i> | | | | | |
| Number of Lanes | 1 | 1 | 1 | 1 | 1 |
| Paved Width (ft) | 11 | 11 | 11 | 11 | 13 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 13 |
| <i>Roadway Condition Information</i> | | | | | |
| SCR (Surface Condition Rating) | 94 | 96 | 96 | 93 | 94 |
| PCR (Pavement Condition Rating) | 65 | 67 | 68 | 62 | 67 |
| <i>Distress Index Values</i> | | | | | |
| Structural Crack Index | 100 | 100 | 99 | 100 | 99 |
| Transverse Cracking Index | 100 | 100 | 99 | 99 | 98 |
| Patching Index | 100 | 100 | 100 | 100 | 100 |
| Rutting Index | 94 | 96 | 96 | 93 | 94 |
| Roughness Condition Index (RCI) | 21 | 23 | 25 | 16 | 27 |

NOTES:
 Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.
 See Section 10 for explanation of SCR, PCR, & all Distress Index Values.
 NC - Not Collected N/A - Not Applicable



ROUTE: 0101 HILINA PALI ROAD



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| | | | | | |
|-----|---------------|----------------|----------------|----------------------|---------|
| PCR | Poor (0 - 60) | Fair (61 - 84) | Good (85 - 94) | Excellent (95 - 100) | No Data |
|-----|---------------|----------------|----------------|----------------------|---------|

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0101 HILINA PALI ROAD
HAVO : HAWAII VOLCANOES NATIONAL PARK

COLLECTED: 4/21/2014
TOTAL LENGTH: 8.50 Miles

PACIFIC WEST REGION

| Section Number | 5 | 6 | 7 | 8 | |
|--------------------------------------|------|------|------|------|--|
| Section Length (mi) | 1.00 | 1.00 | 1.00 | 0.50 | |
| Cross Section Information | | | | | |
| Number of Lanes | 1 | 1 | 1 | 1 | |
| Paved Width (ft) | 12 | 12 | 12 | 11 | |
| Lane Width (ft) | 12 | 12 | 12 | 11 | |
| Roadway Condition Information | | | | | |
| SCR (Surface Condition Rating) | 98 | 95 | 95 | 96 | |
| PCR (Pavement Condition Rating) | 73 | 66 | 66 | 67 | |
| Distress Index Values | | | | | |
| Structural Crack Index | 100 | 100 | 96 | 100 | |
| Transverse Cracking Index | 100 | 99 | 100 | 100 | |
| Patching Index | 100 | 100 | 100 | 100 | |
| Rutting Index | 98 | 95 | 95 | 96 | |
| Roughness Condition Index (RCI) | 35 | 22 | 22 | 23 | |

NOTES:

Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.
 See Section 10 for explanation of SCR, PCR, & all Distress Index Values.

NC - Not Collected N/A - Not Applicable

ROUTE: 0101 HILINA PALI ROAD



| | | | | | | | | | | |
|-----|----------|--|-----------|---|------------|--|-----------|---|---------|--|
| PCR | Poor | | Fair | | Good | | Excellent | | No Data | |
| | (0 - 60) | | (61 - 84) | (85 - 94) | (95 - 100) | | | | | |

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0201 KILAUEA OVERLOOK ROAD
HAVO : HAWAII VOLCANOES NATIONAL PARK

COLLECTED: 4/21/2014
TOTAL LENGTH: 0.20 Miles

PACIFIC WEST REGION

| | | | | | |
|--------------------------------------|------|--|--|--|--|
| Section Number | 0 | | | | |
| Section Length (mi) | 0.20 | | | | |
| Cross Section Information | | | | | |
| Number of Lanes | 2 | | | | |
| Paved Width (ft) | 17 | | | | |
| Lane Width (ft) | 8 | | | | |
| Roadway Condition Information | | | | | |
| SCR (Surface Condition Rating) | 97 | | | | |
| PCR (Pavement Condition Rating) | 97 | | | | |
| Distress Index Values | | | | | |
| Structural Crack Index | 99 | | | | |
| Transverse Cracking Index | 99 | | | | |
| Patching Index | 100 | | | | |
| Rutting Index | 97 | | | | |
| Roughness Condition Index (RCI) | NC | | | | |

NOTES:

Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.
 See Section 10 for explanation of SCR, PCR, & all Distress Index Values.

NC - Not Collected N/A - Not Applicable



ROUTE: 0201 KILAUEA OVERLOOK ROAD



PCR Poor ■ Fair ■ Good ■ Excellent ■ No Data ■
 (0 - 60) (61 - 84) (85 - 94) (95 - 100)

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0204A NAMAKANI PAIO CAMPGROUND ROAD
HAVO : HAWAII VOLCANOES NATIONAL PARK

COLLECTED: 4/20/2014
TOTAL LENGTH: 0.32 Miles

PACIFIC WEST REGION

| | | | | | |
|--------------------------------------|------|--|--|--|--|
| Section Number | 0 | | | | |
| Section Length (mi) | 0.32 | | | | |
| Cross Section Information | | | | | |
| Number of Lanes | 2 | | | | |
| Paved Width (ft) | 17 | | | | |
| Lane Width (ft) | 11 | | | | |
| Roadway Condition Information | | | | | |
| SCR (Surface Condition Rating) | 95 | | | | |
| PCR (Pavement Condition Rating) | 95 | | | | |
| Distress Index Values | | | | | |
| Structural Crack Index | 100 | | | | |
| Transverse Cracking Index | 99 | | | | |
| Patching Index | 100 | | | | |
| Rutting Index | 95 | | | | |
| Roughness Condition Index (RCI) | NC | | | | |

NOTES:

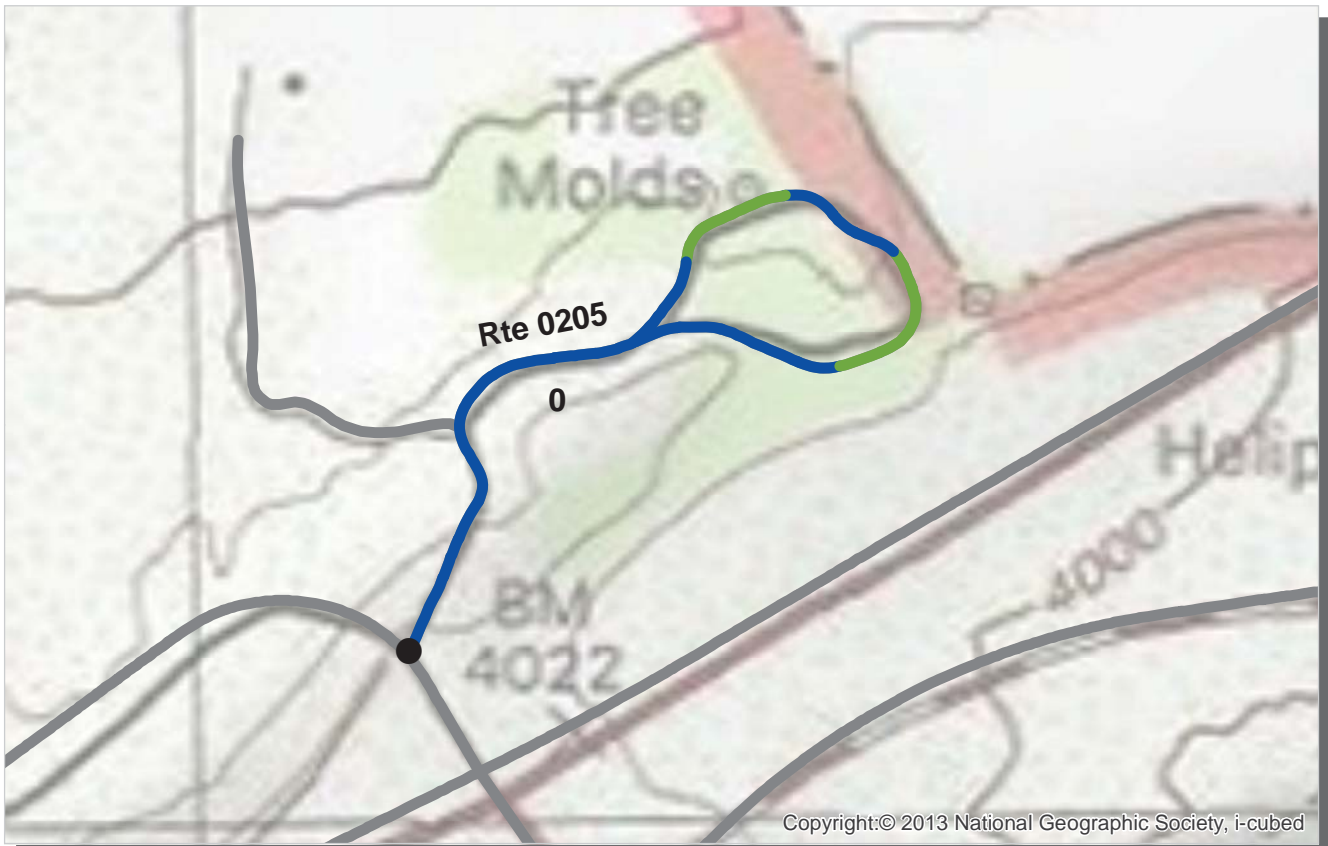
Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.

See Section 10 for explanation of SCR, PCR, & all Distress Index Values.

NC - Not Collected N/A - Not Applicable



ROUTE: 0204A NAMAKANI PAIO CAMPGROUND ROAD



PCR Poor ■ Fair ■ Good ■ Excellent ■ No Data ■
 (0 - 60) (61 - 84) (85 - 94) (95 - 100)

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0205 TREE MOLDS ROAD
HAVO : HAWAII VOLCANOES NATIONAL PARK

COLLECTED: 4/20/2014
TOTAL LENGTH: 0.56 Miles

PACIFIC WEST REGION

| | | | | | |
|--------------------------------------|------|--|--|--|--|
| Section Number | 0 | | | | |
| Section Length (mi) | 0.56 | | | | |
| Cross Section Information | | | | | |
| Number of Lanes | 1 | | | | |
| Paved Width (ft) | 12 | | | | |
| Lane Width (ft) | 12 | | | | |
| Roadway Condition Information | | | | | |
| SCR (Surface Condition Rating) | 95 | | | | |
| PCR (Pavement Condition Rating) | 95 | | | | |
| Distress Index Values | | | | | |
| Structural Crack Index | 100 | | | | |
| Transverse Cracking Index | 100 | | | | |
| Patching Index | 100 | | | | |
| Rutting Index | 95 | | | | |
| Roughness Condition Index (RCI) | NC | | | | |

NOTES:
 Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.
 See Section 10 for explanation of SCR, PCR, & all Distress Index Values.
 NC - Not Collected N/A - Not Applicable



ROUTE: 0205 TREE MOLDS ROAD



| | | | | | |
|-----|----------|-----------|-----------|------------|---------|
| PCR | Poor | Fair | Good | Excellent | No Data |
| | (0 - 60) | (61 - 84) | (85 - 94) | (95 - 100) | |

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0208 MAUNA ULU ACCESS ROAD
HAVO : HAWAII VOLCANOES NATIONAL PARK

COLLECTED: 4/21/2014
TOTAL LENGTH: 0.54 Miles

PACIFIC WEST REGION

| | | | | | |
|--------------------------------------|------|--|--|--|--|
| Section Number | 0 | | | | |
| Section Length (mi) | 0.54 | | | | |
| Cross Section Information | | | | | |
| Number of Lanes | 2 | | | | |
| Paved Width (ft) | 18 | | | | |
| Lane Width (ft) | 10 | | | | |
| Roadway Condition Information | | | | | |
| SCR (Surface Condition Rating) | 97 | | | | |
| PCR (Pavement Condition Rating) | 97 | | | | |
| Distress Index Values | | | | | |
| Structural Crack Index | 100 | | | | |
| Transverse Cracking Index | 97 | | | | |
| Patching Index | 100 | | | | |
| Rutting Index | 98 | | | | |
| Roughness Condition Index (RCI) | NC | | | | |

NOTES:

Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.
 See Section 10 for explanation of SCR, PCR, & all Distress Index Values.

NC - Not Collected N/A - Not Applicable

ROUTE: 0208 MAUNA ULU ACCESS ROAD



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| | | | | | |
|-----|----------|-----------|-----------|------------|---------|
| PCR | Poor | Fair | Good | Excellent | No Data |
| | (0 - 60) | (61 - 84) | (85 - 94) | (95 - 100) | |

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0209 PUU PUAI OVERLOOK ROAD
HAVO : HAWAII VOLCANOES NATIONAL PARK

COLLECTED: 4/21/2014
TOTAL LENGTH: 0.20 Miles

PACIFIC WEST REGION

| | | | | | |
|--------------------------------------|------|--|--|--|--|
| Section Number | 0 | | | | |
| Section Length (mi) | 0.20 | | | | |
| Cross Section Information | | | | | |
| Number of Lanes | 2 | | | | |
| Paved Width (ft) | 18 | | | | |
| Lane Width (ft) | 9 | | | | |
| Roadway Condition Information | | | | | |
| SCR (Surface Condition Rating) | 96 | | | | |
| PCR (Pavement Condition Rating) | 96 | | | | |
| Distress Index Values | | | | | |
| Structural Crack Index | 99 | | | | |
| Transverse Cracking Index | 100 | | | | |
| Patching Index | 100 | | | | |
| Rutting Index | 96 | | | | |
| Roughness Condition Index (RCI) | NC | | | | |

NOTES:

Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.
 See Section 10 for explanation of SCR, PCR, & all Distress Index Values.

NC - Not Collected N/A - Not Applicable



ROUTE: 0209 PUU PUAI OVERLOOK ROAD



| | | | | | | | | | | |
|-----|------|--|------|---|------|--|-----------|---|---------|--|
| PCR | Poor | | Fair | | Good | | Excellent | | No Data | |
| | | (0 - 60) | | (61 - 84) | | (85 - 94) | | (95 - 100) | | |

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0211 STEAM VENTS ROAD
HAVO : HAWAII VOLCANOES NATIONAL PARK

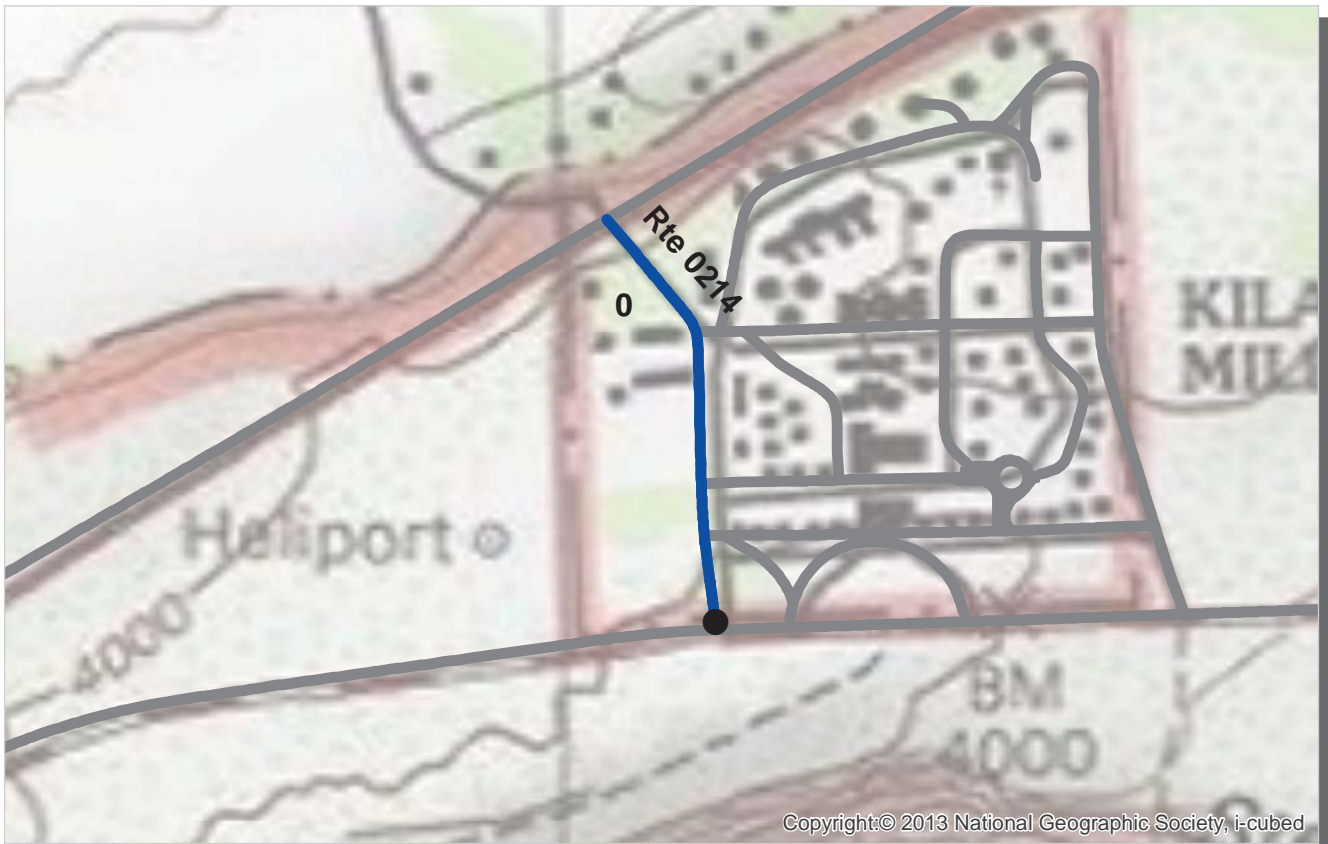
COLLECTED: 4/21/2014
TOTAL LENGTH: 0.12 Miles

PACIFIC WEST REGION

| | | | | | |
|--------------------------------------|------|--|--|--|--|
| Section Number | 0 | | | | |
| Section Length (mi) | 0.12 | | | | |
| Cross Section Information | | | | | |
| Number of Lanes | 2 | | | | |
| Paved Width (ft) | 17 | | | | |
| Lane Width (ft) | 9 | | | | |
| Roadway Condition Information | | | | | |
| SCR (Surface Condition Rating) | 100 | | | | |
| PCR (Pavement Condition Rating) | 100 | | | | |
| Distress Index Values | | | | | |
| Structural Crack Index | 100 | | | | |
| Transverse Cracking Index | 100 | | | | |
| Patching Index | 100 | | | | |
| Rutting Index | 100 | | | | |
| Roughness Condition Index (RCI) | NC | | | | |

NOTES:
 Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.
 See Section 10 for explanation of SCR, PCR, & all Distress Index Values.
 NC - Not Collected N/A - Not Applicable

ROUTE: 0211 STEAM VENTS ROAD



PCR Poor ■ Fair ■ Good ■ Excellent ■ No Data ■
 (0 - 60) (61 - 84) (85 - 94) (95 - 100)

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0214 KILAUEA MILITARY CAMP ROAD
HAVO : HAWAII VOLCANOES NATIONAL PARK

COLLECTED: 4/21/2014
TOTAL LENGTH: 0.20 Miles

PACIFIC WEST REGION

| | | | | | |
|--------------------------------------|------|--|--|--|--|
| Section Number | 0 | | | | |
| Section Length (mi) | 0.20 | | | | |
| Cross Section Information | | | | | |
| Number of Lanes | 2 | | | | |
| Paved Width (ft) | 23 | | | | |
| Lane Width (ft) | 11 | | | | |
| Roadway Condition Information | | | | | |
| SCR (Surface Condition Rating) | 94 | | | | |
| PCR (Pavement Condition Rating) | 94 | | | | |
| Distress Index Values | | | | | |
| Structural Crack Index | 97 | | | | |
| Transverse Cracking Index | 94 | | | | |
| Patching Index | 100 | | | | |
| Rutting Index | 98 | | | | |
| Roughness Condition Index (RCI) | NC | | | | |

NOTES:

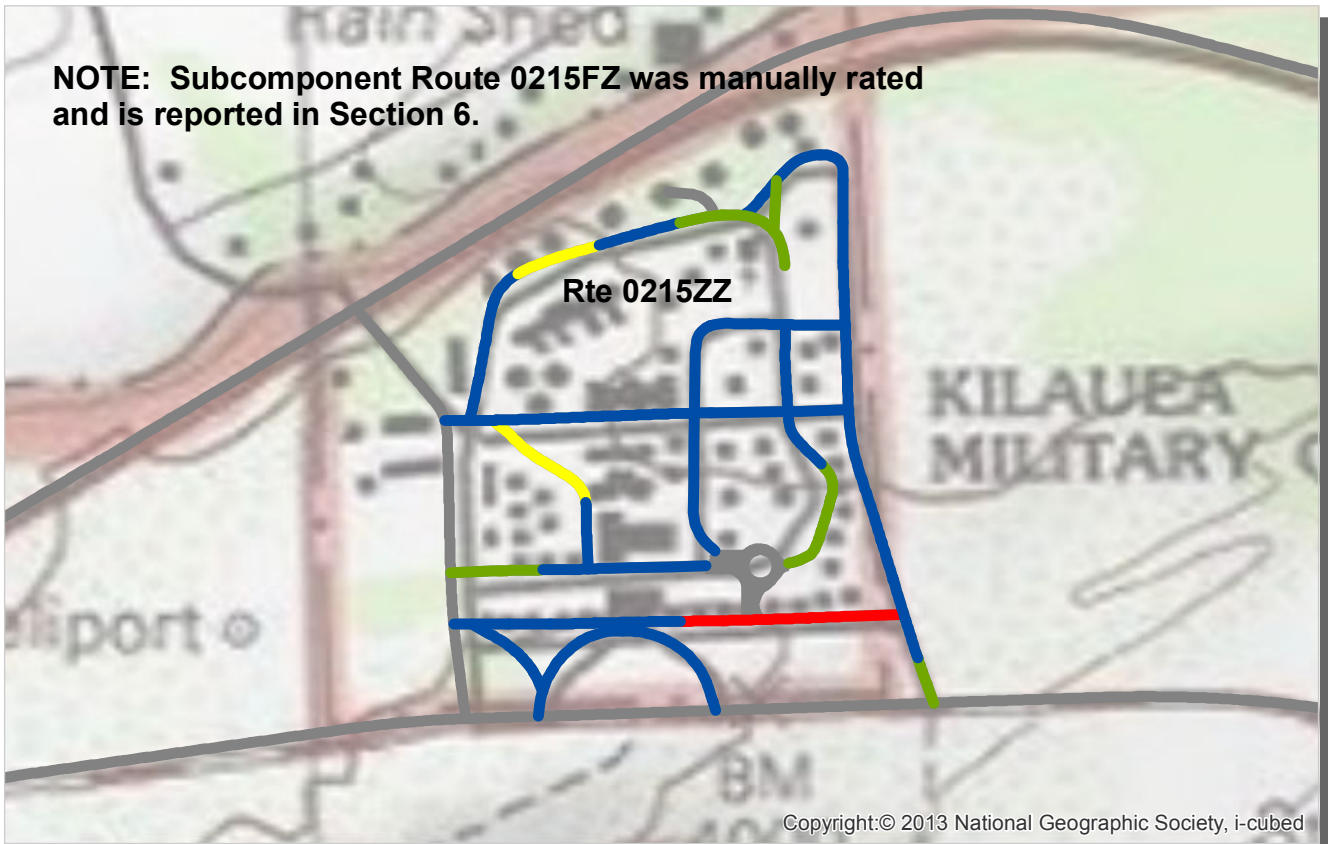
Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.
 See Section 10 for explanation of SCR, PCR, & all Distress Index Values.

NC - Not Collected N/A - Not Applicable



ROUTE: 0214 KILAUEA MILITARY CAMP ROAD

NOTE: Subcomponent Route 0215FZ was manually rated and is reported in Section 6.



PCR Poor ■ Fair ■ Good ■ Excellent ■ No Data ■
 (0 - 60) (61 - 84) (85 - 94) (95 - 100)

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0215ZZ KILAUEA MILITARY CAMP ROADS
HAVO : HAWAII VOLCANOES NATIONAL PARK

Summary Record

COLLECTED: 4/21/2014

PACIFIC WEST REGION

TOTAL LENGTH: 1.63 Miles

| | | | | | |
|--------------------------------------|-----|--|--|--|--|
| Section Number | | | | | |
| Section Length (mi) | | | | | |
| Cross Section Information | | | | | |
| Number of Lanes | N/A | | | | |
| Paved Width (ft) | N/A | | | | |
| Lane Width (ft) | N/A | | | | |
| Roadway Condition Information | | | | | |
| SCR (Surface Condition Rating) | 92 | | | | |
| PCR (Pavement Condition Rating) | 89 | | | | |
| Distress Index Values | | | | | |
| Structural Crack Index | N/A | | | | |
| Transverse Cracking Index | N/A | | | | |
| Patching Index | N/A | | | | |
| Rutting Index | N/A | | | | |
| Roughness Condition Index (RCI) | N/A | | | | |

NOTES:

Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.

See Section 10 for explanation of SCR, PCR, & all Distress Index Values.

NC - Not Collected N/A - Not Applicable

ROUTE: 0215ZZ KILAUEA MILITARY CAMP ROADS



| | | | | | |
|-----|----------|-----------|-----------|------------|---------|
| PCR | Poor | Fair | Good | Excellent | No Data |
| | (0 - 60) | (61 - 84) | (85 - 94) | (95 - 100) | |

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0215AZ KILAUEA MILITARY CAMP ROAD A
HAVO : HAWAII VOLCANOES NATIONAL PARK

Subcomponent Record

COLLECTED: 4/21/2014

PACIFIC WEST REGION

TOTAL LENGTH: 0.04 Miles

| | | | | | |
|--------------------------------------|------|--|--|--|--|
| Section Number | 0 | | | | |
| Section Length (mi) | 0.04 | | | | |
| Cross Section Information | | | | | |
| Number of Lanes | 2 | | | | |
| Paved Width (ft) | 23 | | | | |
| Lane Width (ft) | 11 | | | | |
| Roadway Condition Information | | | | | |
| SCR (Surface Condition Rating) | 98 | | | | |
| PCR (Pavement Condition Rating) | 98 | | | | |
| Distress Index Values | | | | | |
| Structural Crack Index | 98 | | | | |
| Transverse Cracking Index | 100 | | | | |
| Patching Index | 100 | | | | |
| Rutting Index | 100 | | | | |
| Roughness Condition Index (RCI) | NC | | | | |

NOTES:

Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.

See Section 10 for explanation of SCR, PCR, & all Distress Index Values.

NC - Not Collected N/A - Not Applicable

ROUTE: 0215AZ KILAUEA MILITARY CAMP ROAD A



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| | | | | | |
|-----|----------|-----------|-----------|------------|---------|
| PCR | Poor | Fair | Good | Excellent | No Data |
| | (0 - 60) | (61 - 84) | (85 - 94) | (95 - 100) | |

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0215BZ KILAUEA MILITARY CAMP ROAD B
HAVO : HAWAII VOLCANOES NATIONAL PARK

Subcomponent Record

COLLECTED: 4/21/2014

PACIFIC WEST REGION

TOTAL LENGTH: 0.12 Miles

| | | | | | |
|--------------------------------------|------|--|--|--|--|
| Section Number | 0 | | | | |
| Section Length (mi) | 0.12 | | | | |
| Cross Section Information | | | | | |
| Number of Lanes | 2 | | | | |
| Paved Width (ft) | 29 | | | | |
| Lane Width (ft) | 15 | | | | |
| Roadway Condition Information | | | | | |
| SCR (Surface Condition Rating) | 99 | | | | |
| PCR (Pavement Condition Rating) | 99 | | | | |
| Distress Index Values | | | | | |
| Structural Crack Index | 100 | | | | |
| Transverse Cracking Index | 99 | | | | |
| Patching Index | 100 | | | | |
| Rutting Index | 100 | | | | |
| Roughness Condition Index (RCI) | NC | | | | |

NOTES:

Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.

See Section 10 for explanation of SCR, PCR, & all Distress Index Values.

NC - Not Collected N/A - Not Applicable



ROUTE: 0215BZ KILAUEA MILITARY CAMP ROAD B



| | | | | | |
|-----|----------|-----------|-----------|------------|---------|
| PCR | Poor | Fair | Good | Excellent | No Data |
| | (0 - 60) | (61 - 84) | (85 - 94) | (95 - 100) | |

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0215DZ KILAUEA MILITARY CAMP ROAD D
HAVO : HAWAII VOLCANOES NATIONAL PARK

Subcomponent Record

COLLECTED: 4/21/2014

PACIFIC WEST REGION

TOTAL LENGTH: 0.33 Miles

| | | | | | |
|--------------------------------------|------|--|--|--|--|
| Section Number | 0 | | | | |
| Section Length (mi) | 0.33 | | | | |
| Cross Section Information | | | | | |
| Number of Lanes | 2 | | | | |
| Paved Width (ft) | 19 | | | | |
| Lane Width (ft) | 10 | | | | |
| Roadway Condition Information | | | | | |
| SCR (Surface Condition Rating) | 97 | | | | |
| PCR (Pavement Condition Rating) | 97 | | | | |
| Distress Index Values | | | | | |
| Structural Crack Index | 100 | | | | |
| Transverse Cracking Index | 100 | | | | |
| Patching Index | 99 | | | | |
| Rutting Index | 97 | | | | |
| Roughness Condition Index (RCI) | NC | | | | |

NOTES:

Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.

See Section 10 for explanation of SCR, PCR, & all Distress Index Values.

NC - Not Collected N/A - Not Applicable



ROUTE: 0215DZ KILAUEA MILITARY CAMP ROAD D



PCR Poor ■ Fair ■ Good ■ Excellent ■ No Data ■
 (0 - 60) (61 - 84) (85 - 94) (95 - 100)

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0215EZ KILAUEA MILITARY CAMP ROAD E
HAVO : HAWAII VOLCANOES NATIONAL PARK

Subcomponent Record

COLLECTED: 4/21/2014

PACIFIC WEST REGION

TOTAL LENGTH: 0.12 Miles

| | | | | | |
|--------------------------------------|------|--|--|--|--|
| Section Number | 0 | | | | |
| Section Length (mi) | 0.12 | | | | |
| Cross Section Information | | | | | |
| Number of Lanes | 2 | | | | |
| Paved Width (ft) | 18 | | | | |
| Lane Width (ft) | 9 | | | | |
| Roadway Condition Information | | | | | |
| SCR (Surface Condition Rating) | 94 | | | | |
| PCR (Pavement Condition Rating) | 94 | | | | |
| Distress Index Values | | | | | |
| Structural Crack Index | 100 | | | | |
| Transverse Cracking Index | 99 | | | | |
| Patching Index | 94 | | | | |
| Rutting Index | 100 | | | | |
| Roughness Condition Index (RCI) | NC | | | | |

NOTES:

Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.

See Section 10 for explanation of SCR, PCR, & all Distress Index Values.

NC - Not Collected N/A - Not Applicable



ROUTE: 0215EZ KILAUEA MILITARY CAMP ROAD E



PCR Poor ■ Fair ■ Good ■ Excellent ■ No Data ■
 (0 - 60) (61 - 84) (85 - 94) (95 - 100)

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0215GZ KILAUEA MILITARY CAMP ROAD G
HAVO : HAWAII VOLCANOES NATIONAL PARK

Subcomponent Record

COLLECTED: 4/21/2014

PACIFIC WEST REGION

TOTAL LENGTH: 0.09 Miles

| | | | | | |
|--------------------------------------|------|--|--|--|--|
| Section Number | 0 | | | | |
| Section Length (mi) | 0.09 | | | | |
| Cross Section Information | | | | | |
| Number of Lanes | 2 | | | | |
| Paved Width (ft) | 21 | | | | |
| Lane Width (ft) | 11 | | | | |
| Roadway Condition Information | | | | | |
| SCR (Surface Condition Rating) | 84 | | | | |
| PCR (Pavement Condition Rating) | 84 | | | | |
| Distress Index Values | | | | | |
| Structural Crack Index | 89 | | | | |
| Transverse Cracking Index | 84 | | | | |
| Patching Index | 95 | | | | |
| Rutting Index | 95 | | | | |
| Roughness Condition Index (RCI) | NC | | | | |

NOTES:

Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.

See Section 10 for explanation of SCR, PCR, & all Distress Index Values.

NC - Not Collected N/A - Not Applicable

ROUTE: 0215GZ KILAUEA MILITARY CAMP ROAD G



PCR Poor ■ Fair ■ Good ■ Excellent ■ No Data ■
 (0 - 60) (61 - 84) (85 - 94) (95 - 100)

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0215HZ KILAUEA MILITARY CAMP ROAD H
HAVO : HAWAII VOLCANOES NATIONAL PARK

Subcomponent Record

COLLECTED: 4/21/2014

PACIFIC WEST REGION

TOTAL LENGTH: 0.18 Miles

| | | | | | |
|--------------------------------------|------|--|--|--|--|
| Section Number | 0 | | | | |
| Section Length (mi) | 0.18 | | | | |
| Cross Section Information | | | | | |
| Number of Lanes | 2 | | | | |
| Paved Width (ft) | 21 | | | | |
| Lane Width (ft) | 10 | | | | |
| Roadway Condition Information | | | | | |
| SCR (Surface Condition Rating) | 95 | | | | |
| PCR (Pavement Condition Rating) | 95 | | | | |
| Distress Index Values | | | | | |
| Structural Crack Index | 100 | | | | |
| Transverse Cracking Index | 100 | | | | |
| Patching Index | 96 | | | | |
| Rutting Index | 95 | | | | |
| Roughness Condition Index (RCI) | NC | | | | |

NOTES:

Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.

See Section 10 for explanation of SCR, PCR, & all Distress Index Values.

NC - Not Collected N/A - Not Applicable



ROUTE: 0215HZ KILAUEA MILITARY CAMP ROAD H



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PCR Poor (0 - 60) Fair (61 - 84) Good (85 - 94) Excellent (95 - 100) No Data

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0215IZ KILAUEA MILITARY CAMP ROAD I
HAVO : HAWAII VOLCANOES NATIONAL PARK

Subcomponent Record

COLLECTED: 4/21/2014

PACIFIC WEST REGION

TOTAL LENGTH: 0.13 Miles

| | | | | | |
|--------------------------------------|------|--|--|--|--|
| Section Number | 0 | | | | |
| Section Length (mi) | 0.13 | | | | |
| Cross Section Information | | | | | |
| Number of Lanes | 2 | | | | |
| Paved Width (ft) | 21 | | | | |
| Lane Width (ft) | 10 | | | | |
| Roadway Condition Information | | | | | |
| SCR (Surface Condition Rating) | 96 | | | | |
| PCR (Pavement Condition Rating) | 96 | | | | |
| Distress Index Values | | | | | |
| Structural Crack Index | 100 | | | | |
| Transverse Cracking Index | 100 | | | | |
| Patching Index | 98 | | | | |
| Rutting Index | 96 | | | | |
| Roughness Condition Index (RCI) | NC | | | | |

NOTES:

Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.

See Section 10 for explanation of SCR, PCR, & all Distress Index Values.

NC - Not Collected N/A - Not Applicable

ROUTE: 0215IZ KILAUEA MILITARY CAMP ROAD I



PCR Poor ■ Fair ■ Good ■ Excellent ■ No Data ■
 (0 - 60) (61 - 84) (85 - 94) (95 - 100)

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0215JZ KILAUEA MILITARY CAMP ROAD J
HAVO : HAWAII VOLCANOES NATIONAL PARK

Subcomponent Record

COLLECTED: 4/21/2014

PACIFIC WEST REGION

TOTAL LENGTH: 0.18 Miles

| | | | | | |
|--------------------------------------|------|--|--|--|--|
| Section Number | 0 | | | | |
| Section Length (mi) | 0.18 | | | | |
| Cross Section Information | | | | | |
| Number of Lanes | 2 | | | | |
| Paved Width (ft) | 20 | | | | |
| Lane Width (ft) | 10 | | | | |
| Roadway Condition Information | | | | | |
| SCR (Surface Condition Rating) | 98 | | | | |
| PCR (Pavement Condition Rating) | 98 | | | | |
| Distress Index Values | | | | | |
| Structural Crack Index | 100 | | | | |
| Transverse Cracking Index | 100 | | | | |
| Patching Index | 100 | | | | |
| Rutting Index | 98 | | | | |
| Roughness Condition Index (RCI) | NC | | | | |

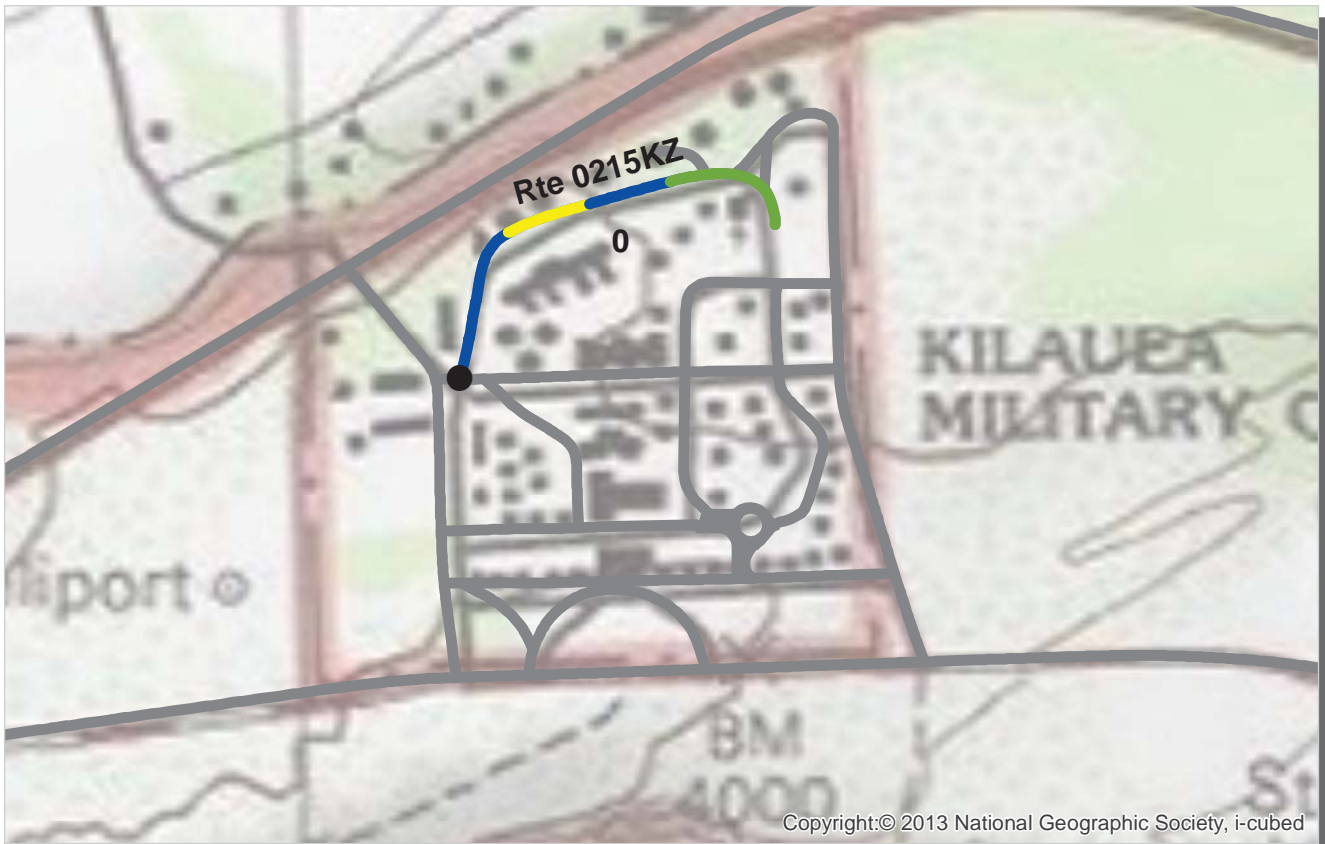
NOTES:

Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.

See Section 10 for explanation of SCR, PCR, & all Distress Index Values.

NC - Not Collected N/A - Not Applicable

ROUTE: 0215JZ KILAUEA MILITARY CAMP ROAD J



PCR Poor ■ (0 - 60) Fair ■ (61 - 84) Good ■ (85 - 94) Excellent ■ (95 - 100) No Data ■

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0215KZ KILAUEA MILITARY CAMP ROAD K
HAVO : HAWAII VOLCANOES NATIONAL PARK

Subcomponent Record

COLLECTED: 4/21/2014

PACIFIC WEST REGION

TOTAL LENGTH: 0.23 Miles

| | | | | | |
|--------------------------------------|------|--|--|--|--|
| Section Number | 0 | | | | |
| Section Length (mi) | 0.23 | | | | |
| Cross Section Information | | | | | |
| Number of Lanes | 1 | | | | |
| Paved Width (ft) | 17 | | | | |
| Lane Width (ft) | 14 | | | | |
| Roadway Condition Information | | | | | |
| SCR (Surface Condition Rating) | 94 | | | | |
| PCR (Pavement Condition Rating) | 94 | | | | |
| Distress Index Values | | | | | |
| Structural Crack Index | 100 | | | | |
| Transverse Cracking Index | 100 | | | | |
| Patching Index | 94 | | | | |
| Rutting Index | 98 | | | | |
| Roughness Condition Index (RCI) | NC | | | | |

NOTES:

Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.

See Section 10 for explanation of SCR, PCR, & all Distress Index Values.

NC - Not Collected N/A - Not Applicable

ROUTE: 0215KZ KILAUEA MILITARY CAMP ROAD K



PCR Poor ■ Fair ■ Good ■ Excellent ■ No Data ■
 (0 - 60) (61 - 84) (85 - 94) (95 - 100)

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0215LZ KILAUEA MILITARY CAMP ROAD L
HAVO : HAWAII VOLCANOES NATIONAL PARK

Subcomponent Record

COLLECTED: 4/21/2014

PACIFIC WEST REGION

TOTAL LENGTH: 0.02 Miles

| | | | | | |
|--------------------------------------|------|--|--|--|--|
| Section Number | 0 | | | | |
| Section Length (mi) | 0.02 | | | | |
| Cross Section Information | | | | | |
| Number of Lanes | 2 | | | | |
| Paved Width (ft) | 19 | | | | |
| Lane Width (ft) | 10 | | | | |
| Roadway Condition Information | | | | | |
| SCR (Surface Condition Rating) | 87 | | | | |
| PCR (Pavement Condition Rating) | 87 | | | | |
| Distress Index Values | | | | | |
| Structural Crack Index | 100 | | | | |
| Transverse Cracking Index | 98 | | | | |
| Patching Index | 100 | | | | |
| Rutting Index | 87 | | | | |
| Roughness Condition Index (RCI) | NC | | | | |

NOTES:

Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.

See Section 10 for explanation of SCR, PCR, & all Distress Index Values.

NC - Not Collected N/A - Not Applicable

ROUTE: 0215LZ KILAUEA MILITARY CAMP ROAD L



PCR Poor ■ Fair ■ Good ■ Excellent ■ No Data ■
 (0 - 60) (61 - 84) (85 - 94) (95 - 100)

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0400 WATER TANK ROAD
HAVO : HAWAII VOLCANOES NATIONAL PARK

COLLECTED: 4/22/2014
TOTAL LENGTH: 0.34 Miles

PACIFIC WEST REGION

| | | | | | |
|--------------------------------------|------|--|--|--|--|
| <i>Section Number</i> | 0 | | | | |
| <i>Section Length (mi)</i> | 0.34 | | | | |
| <i>Cross Section Information</i> | | | | | |
| Number of Lanes | 2 | | | | |
| Paved Width (ft) | 17 | | | | |
| Lane Width (ft) | 10 | | | | |
| <i>Roadway Condition Information</i> | | | | | |
| SCR (Surface Condition Rating) | 92 | | | | |
| PCR (Pavement Condition Rating) | 92 | | | | |
| <i>Distress Index Values</i> | | | | | |
| Structural Crack Index | 92 | | | | |
| Transverse Cracking Index | 96 | | | | |
| Patching Index | 100 | | | | |
| Rutting Index | 96 | | | | |
| Roughness Condition Index (RCI) | NC | | | | |

NOTES:

Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.
 See Section 10 for explanation of SCR, PCR, & all Distress Index Values.

NC - Not Collected N/A - Not Applicable



ROUTE: 0400 WATER TANK ROAD



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| | | | | | |
|-----|----------|-----------|-----------|------------|---------|
| PCR | Poor | Fair | Good | Excellent | No Data |
| | (0 - 60) | (61 - 84) | (85 - 94) | (95 - 100) | |

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0401 NORTH RESIDENCE ROAD
HAVO : HAWAII VOLCANOES NATIONAL PARK

COLLECTED: 4/19/2014
TOTAL LENGTH: 0.43 Miles

PACIFIC WEST REGION

| | | | | | |
|--------------------------------------|------|--|--|--|--|
| Section Number | 0 | | | | |
| Section Length (mi) | 0.43 | | | | |
| Cross Section Information | | | | | |
| Number of Lanes | 2 | | | | |
| Paved Width (ft) | 20 | | | | |
| Lane Width (ft) | 10 | | | | |
| Roadway Condition Information | | | | | |
| SCR (Surface Condition Rating) | 93 | | | | |
| PCR (Pavement Condition Rating) | 93 | | | | |
| Distress Index Values | | | | | |
| Structural Crack Index | 97 | | | | |
| Transverse Cracking Index | 98 | | | | |
| Patching Index | 100 | | | | |
| Rutting Index | 93 | | | | |
| Roughness Condition Index (RCI) | NC | | | | |

NOTES:

Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.
 See Section 10 for explanation of SCR, PCR, & all Distress Index Values.

NC - Not Collected N/A - Not Applicable



ROUTE: 0401 NORTH RESIDENCE ROAD



PCR Poor ■ Fair ■ Good ■ Excellent ■ No Data ■
 (0 - 60) (61 - 84) (85 - 94) (95 - 100)

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0403 SOUTH RESIDENCE LOOP
HAVO : HAWAII VOLCANOES NATIONAL PARK

COLLECTED: 4/19/2014
TOTAL LENGTH: 0.42 Miles

PACIFIC WEST REGION

| | | | | | |
|--------------------------------------|------|--|--|--|--|
| Section Number | 0 | | | | |
| Section Length (mi) | 0.42 | | | | |
| Cross Section Information | | | | | |
| Number of Lanes | 1 | | | | |
| Paved Width (ft) | 13 | | | | |
| Lane Width (ft) | 10 | | | | |
| Roadway Condition Information | | | | | |
| SCR (Surface Condition Rating) | 94 | | | | |
| PCR (Pavement Condition Rating) | 94 | | | | |
| Distress Index Values | | | | | |
| Structural Crack Index | 100 | | | | |
| Transverse Cracking Index | 100 | | | | |
| Patching Index | 100 | | | | |
| Rutting Index | 94 | | | | |
| Roughness Condition Index (RCI) | NC | | | | |

NOTES:

Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.

See Section 10 for explanation of SCR, PCR, & all Distress Index Values.

NC - Not Collected N/A - Not Applicable

ROUTE: 0403 SOUTH RESIDENCE LOOP



PCR Poor ■ Fair ■ Good ■ Excellent ■ No Data ■
 (0 - 60) (61 - 84) (85 - 94) (95 - 100)

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0405 AINAHOU ROAD
HAVO : HAWAII VOLCANOES NATIONAL PARK

COLLECTED: 4/21/2014
TOTAL LENGTH: 0.06 Miles

PACIFIC WEST REGION

| | | | | | |
|--------------------------------------|------|--|--|--|--|
| Section Number | 0 | | | | |
| Section Length (mi) | 0.06 | | | | |
| Cross Section Information | | | | | |
| Number of Lanes | 2 | | | | |
| Paved Width (ft) | 18 | | | | |
| Lane Width (ft) | 9 | | | | |
| Roadway Condition Information | | | | | |
| SCR (Surface Condition Rating) | 98 | | | | |
| PCR (Pavement Condition Rating) | 98 | | | | |
| Distress Index Values | | | | | |
| Structural Crack Index | 100 | | | | |
| Transverse Cracking Index | 100 | | | | |
| Patching Index | 100 | | | | |
| Rutting Index | 98 | | | | |
| Roughness Condition Index (RCI) | NC | | | | |

NOTES:
 Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.
 See Section 10 for explanation of SCR, PCR, & all Distress Index Values.
 NC - Not Collected N/A - Not Applicable



ROUTE: 0405 AINAHOU ROAD



PCR Poor ■ Fair ■ Good ■ Excellent ■ No Data ■
 (0 - 60) (61 - 84) (85 - 94) (95 - 100)

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0409 RESOURCE MANAGEMENT ROAD
HAVO : HAWAII VOLCANOES NATIONAL PARK

COLLECTED: 4/19/2014
TOTAL LENGTH: 0.47 Miles

PACIFIC WEST REGION

| | | | | | |
|--------------------------------------|------|--|--|--|--|
| Section Number | 0 | | | | |
| Section Length (mi) | 0.47 | | | | |
| Cross Section Information | | | | | |
| Number of Lanes | 2 | | | | |
| Paved Width (ft) | 20 | | | | |
| Lane Width (ft) | 10 | | | | |
| Roadway Condition Information | | | | | |
| SCR (Surface Condition Rating) | 96 | | | | |
| PCR (Pavement Condition Rating) | 96 | | | | |
| Distress Index Values | | | | | |
| Structural Crack Index | 100 | | | | |
| Transverse Cracking Index | 100 | | | | |
| Patching Index | 100 | | | | |
| Rutting Index | 96 | | | | |
| Roughness Condition Index (RCI) | NC | | | | |

NOTES:

Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.
 See Section 10 for explanation of SCR, PCR, & all Distress Index Values.
 NC - Not Collected N/A - Not Applicable



ROUTE: 0409 RESOURCE MANAGEMENT ROAD

Section 6
**Manually Rated Paved Route
Condition Rating Sheets**



Hawaii Volcanoes National Park



**Federal Lands Highway
Road Inventory Program**

Hawaii Volcanoes National Park

MANUALLY RATED PAVED ROUTE CONDITION RATING SHEETS

Manually rated roads are non-linear roads or roads not suitable for the Data Collection Vehicle (DCV). The manually rated roads at Hawaii Volcanoes National Park (HAVO) were collected twice in Cycle 5 by the Road Inventory Program (RIP).

- January 2012: First manual collection (no automated vehicle collection)
- April 2014: Automated vehicle and second manual collection

Following the 2012 data collection effort, the RIP Automated Data Collection Vehicle (DCV) visited Hawaii in April of 2014 to perform automated collection on all NPS paved roads. During the DCV collection visit, a second manual condition assessment was performed on parking areas and manually rated roads and the previous Cycle 5 manual condition ratings were updated.

The 2014 condition assessment at HAVO incorporated new manual rating methodologies designed to improve the identification of treatment recommendations and pavement condition descriptions for Manually Rated Routes. These new methodologies will be used in future Cycle 6 collections and were included in this 2014 Final Cycle 5 Report. A detailed description of the new manual rating procedures can be found in the Appendix of this Report.

To facilitate comparisons of the 2012 and 2014 manual ratings, both condition rating sheets for each route are included in this final Cycle 5 Report.

- Section 6A: Updated Ratings from April of 2014
- Section 6B: Previous Ratings from January of 2012

SECTION 6A

MANUALLY RATED PAVED ROUTE CONDITION RATING SHEETS

FROM

APRIL 2014

Hawaii Volcanoes National Park

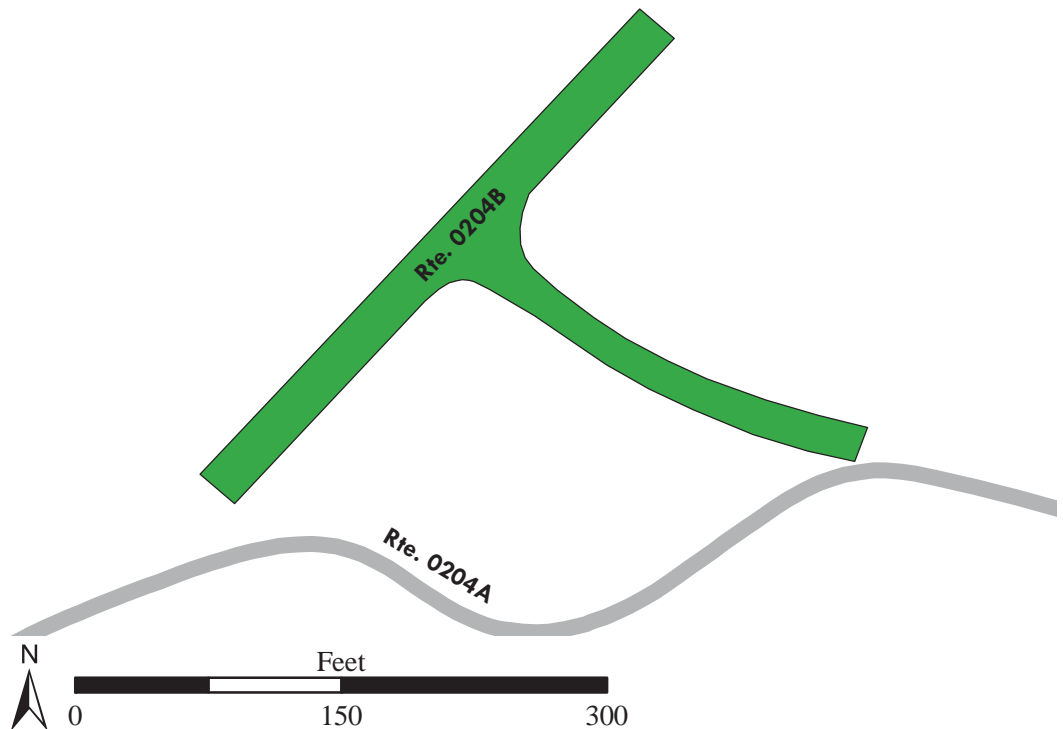
ROUTE 0204B: NAMAKANI PAIO RENTAL CABIN ACCESS ROAD

Manual Rating

FROM ROUTE 0204A (NAMAKANI PAIO CAMPGROUND ROAD) AT MP 0.05 ON RIGHT

THROUGH RENTAL CABINS AREA

| Inspection Date | FMSS Number | User Access | Surface Type |
|---|--|------------------------|---|
| 4/12/2014 | 21540 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 13,795 | 0.24 | NOT APPLICABLE | N/A |
| Curb Type | | Curb & Gutter Type | |
| NO CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| PREVENTIVE MAINTENANCE | | GOOD / 90 | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | |
| Poor | (0 - 60) | Fair | (61 - 84) |
| | | Good | (85 - 94) |
| | | Excellent | (95 - 100) |
| | | Not Rated | |
| See Appendix for definitions and formulas | | | |



Hawaii Volcanoes National Park

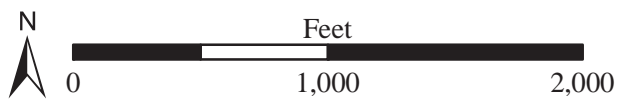
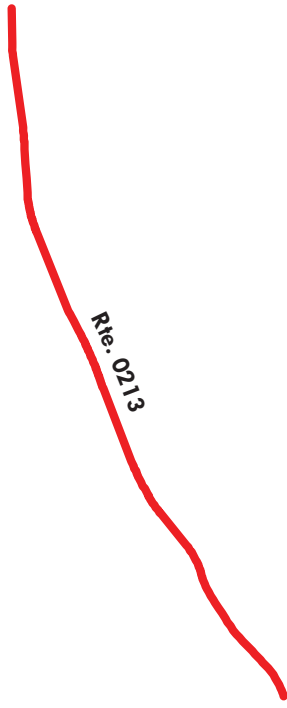
ROUTE 0213: KAHUKU ROAD

Manual Rating

FROM HAWAII STATE ROUTE 11 (HAWAII BELT ROAD / MAMALAHOA HIGHWAY)

TO ROUTE 0934 (KAHUKU ADMINISTRATIVE PARKING)

| Inspection Date | FMSS Number | User Access | Surface Type |
|--|-------------------------|--|--------------|
| 4/18/2014 | 88336 | PUBLIC | ASPHALT |
| Paved Length (mi.) / Width (ft.) | Lane Miles (11' Widths) | Condition Rating / PCR / Pavement Recommendation | |
| 0.56 miles / 17.6 feet | 0.89 | POOR / 30 / RECONSTRUCTION | |
| Curb Type | | Curb & Gutter Type | |
| NO CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 1 | |
| Route Condition Legend – Pavement Condition Rating (PCR) Poor (0 - 60) Fair (61 - 84) Good (85 - 94) Excellent (95 - 100) Not Rated See Appendix for definitions and formulas | | | |



Hawaii Volcanoes National Park
ROUTE 0213: KAHUKU ROAD
Condition Photos



HAVO_0213_7624.JPG



HAVO_0213_7625.JPG



HAVO_0213_7626.JPG



HAVO_0213_7627.JPG



HAVO_0213_7628.JPG



HAVO_0213_7629.JPG

Hawaii Volcanoes National Park

ROUTE 0215ZZ: KILAUEA MILITARY CAMP ROADS

Summary Route

FROM ROUTE 0010 (CRATER RIM DRIVE) AND 0214 (KILAUEA MILITARY CAMP ROAD)
THROUGH KILAUEA MILITARY CAMP

| Inspection Date | FMSS Number | User Access | Surface Type |
|--|--|------------------------|---|
| 4/21/2014 | 239127 | PUBLIC | ASPHALT |
| Paved Length (mi.) / Width (ft.) | Lane Miles (11' Widths) | Condition Rating / PCR | |
| 1.63 miles / 23 feet | 3.41 | SUMMARY / 89 | |
| Curb Type | | Curb & Gutter Type | |
| N/A | | N/A | |
| Culverts | Drop Inlets | Gates | |
| 0 | 6 | 3 | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | |
| Poor | (0 - 60) | Fair | (61 - 84) |
| | | Good | (85 - 94) |
| | | Excellent | (95 - 100) |
| | | Not Rated | |
| See Appendix for definitions and formulas | | | |

The condition shown on this page reflects the overall condition; it may not reflect individual subcomponent condition ratings.



Route 0215ZZ is made up of 12 subcomponent routes (AZ through LZ):
 --11 Data Collection Vehicle (DCV) routes (reported in Section 5)
 --1 manually rated route (0215FZ, reported in Section 6)

Hawaii Volcanoes National Park

ROUTE 0215FZ: KILAUEA MILITARY CAMP ROAD F

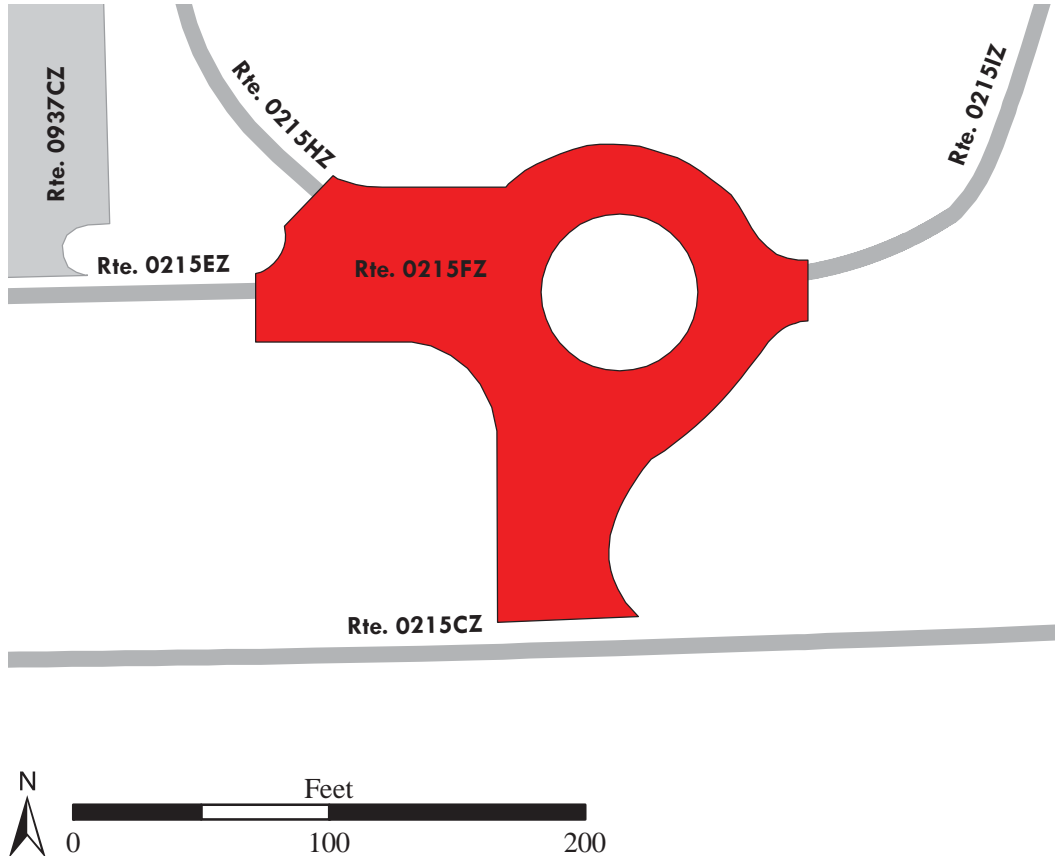
Subcomponent of Route HAVO-0215ZZ

Manual Rating

FROM ROUTE 0215CZ (KILAUEA MILITARY CAMP ROAD C)

TO ROUTES 0215EZ (KILAUEA MILITARY CAMP ROAD E), 0215HZ (KILAUEA MILITARY CAMP ROAD H),
AND 0215IZ (KILAUEA MILITARY CAMP ROAD I)

| Inspection Date | FMSS Number | User Access | Surface Type |
|---|-------------------------|------------------------|---------------------|
| 4/10/2014 | 239127 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 16,219 | 0.28 | 3 | MODERATE REPAIR |
| Curb Type | | Curb & Gutter Type | |
| STONE CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 1 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| HEAVY 3R TREATMENTS | | POOR / 53 | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | |
| Poor | (0 - 60) | Fair | (61 - 84) |
| | | Good | (85 - 94) |
| | | Excellent | (95 - 100) |
| | | Not Rated | |
| See Appendix for definitions and formulas | | | |



Hawaii Volcanoes National Park

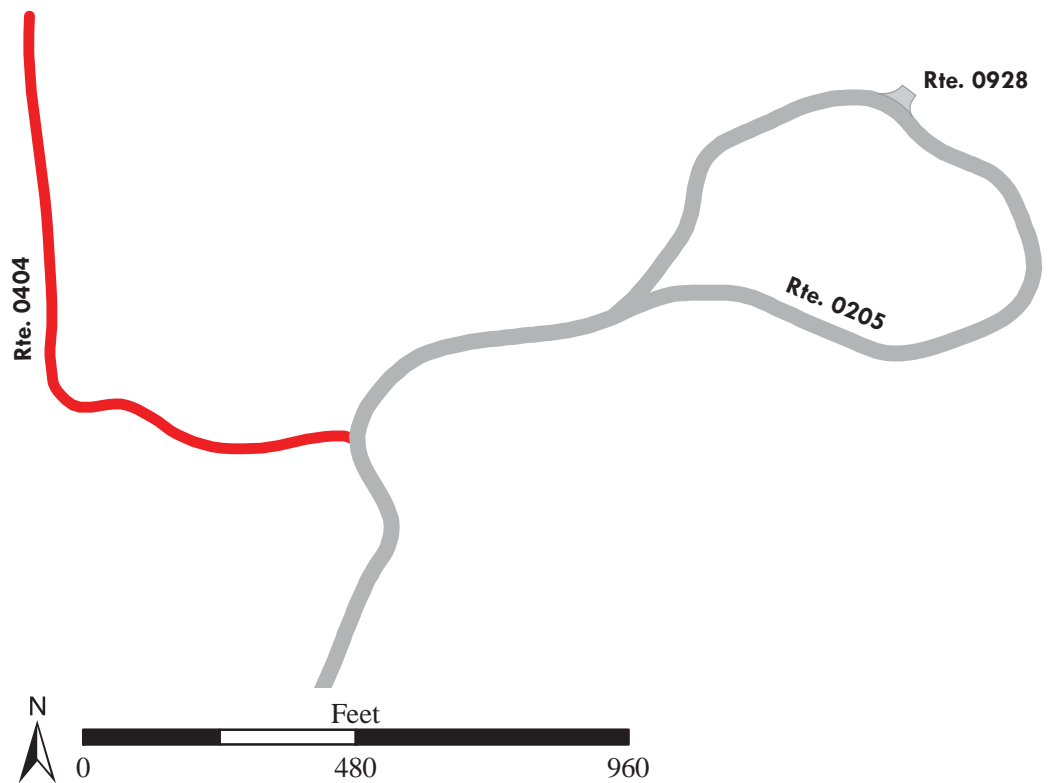
ROUTE 0404: TREE MOLDS STABLE ROAD

Manual Rating

FROM ROUTE 0205 (TREE MOLDS ROAD) AT MP 0.12 ON LEFT

TO END OF UNPAVED LOOP

| Inspection Date | FMSS Number | User Access | Surface Type |
|--|-------------------------|--|--------------|
| 4/12/2014 | 22601 | PUBLIC | ASPHALT |
| Paved Length (mi.) / Width (ft.) | Lane Miles (11' Widths) | Condition Rating / PCR / Pavement Recommendation | |
| 0.23 miles / 10 feet | 0.21 | POOR / 30 / RECONSTRUCTION | |
| Curb Type | | Curb & Gutter Type | |
| NO CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 1 | |
| Route Condition Legend – Pavement Condition Rating (PCR) Poor (0 - 60) Fair (61 - 84) Good (85 - 94) Excellent (95 - 100) Not Rated See Appendix for definitions and formulas | | | |



Hawaii Volcanoes National Park
ROUTE 0404: TREE MOLDS STABLE ROAD
Condition Photos



HAVO_0404_7568.JPG



HAVO_0404_7569.JPG



HAVO_0404_7570.JPG



HAVO_0404_7571.JPG



HAVO_0404_7572.JPG

Hawaii Volcanoes National Park

ROUTE 0416ZZ: KILAUEA WATER TANKS AREA ROADS

Summary Route

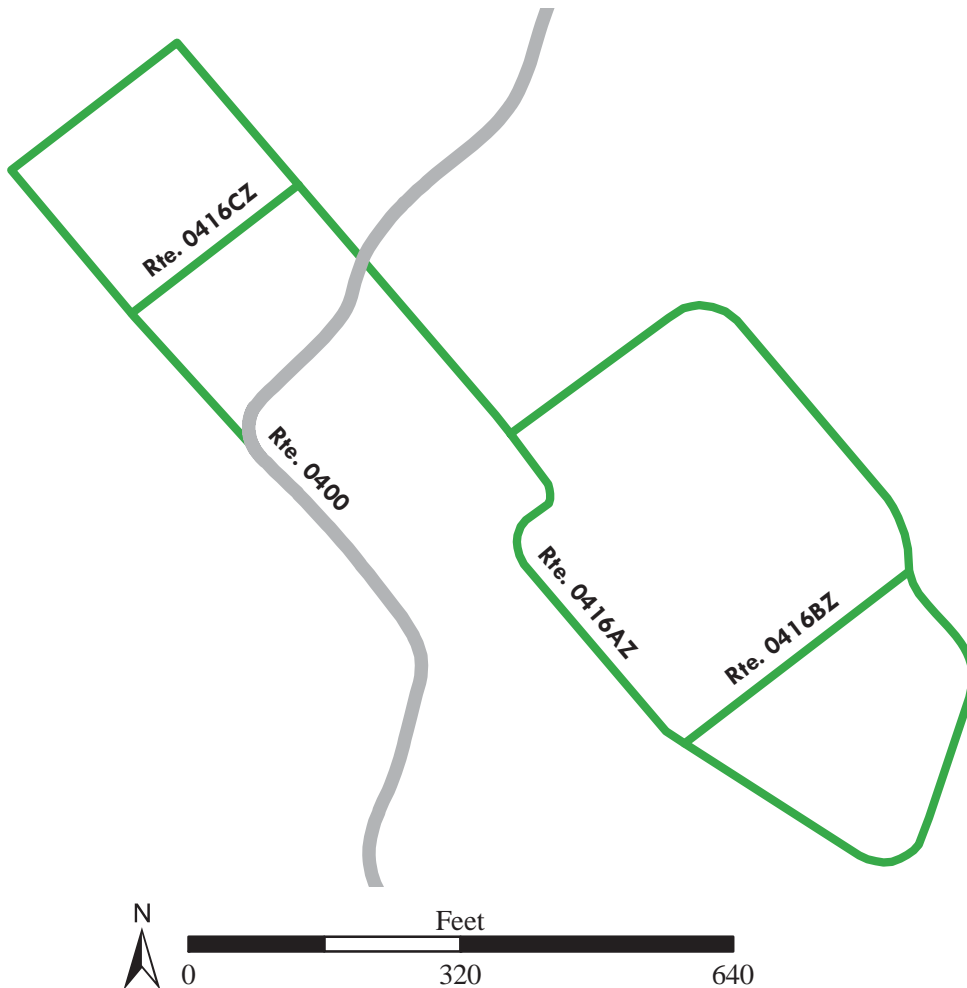
Manual Rating

FROM GRAVEL PILE AND ROUTE 0400 (WATER TANK ROAD)

THROUGH WATER TANK AREA

| Inspection Date | FMSS Number | User Access | Surface Type |
|--|-------------------------|------------------------|--------------|
| 4/21/2014 | 21519 | NONPUBLIC | ASPHALT |
| Paved Length (mi.) / Width (ft.) | Lane Miles (11' Widths) | Condition Rating / PCR | |
| 0.69 miles / 14 feet | 0.87 | SUMMARY / 89 | |
| Curb Type | | Curb & Gutter Type | |
| RECYCLED PLASTIC LUMBER CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 3 | 1 | 2 | |
| Route Condition Legend – Pavement Condition Rating (PCR) Poor (0 - 60) Fair (61 - 84) Good (85 - 94) Excellent (95 - 100) Not Rated See Appendix for definitions and formulas | | | |

The condition shown on this page reflects the overall condition; it may not reflect individual subcomponent condition ratings.



Hawaii Volcanoes National Park

ROUTE 0416AZ: KILAUEA WATER TANKS AREA ROAD A

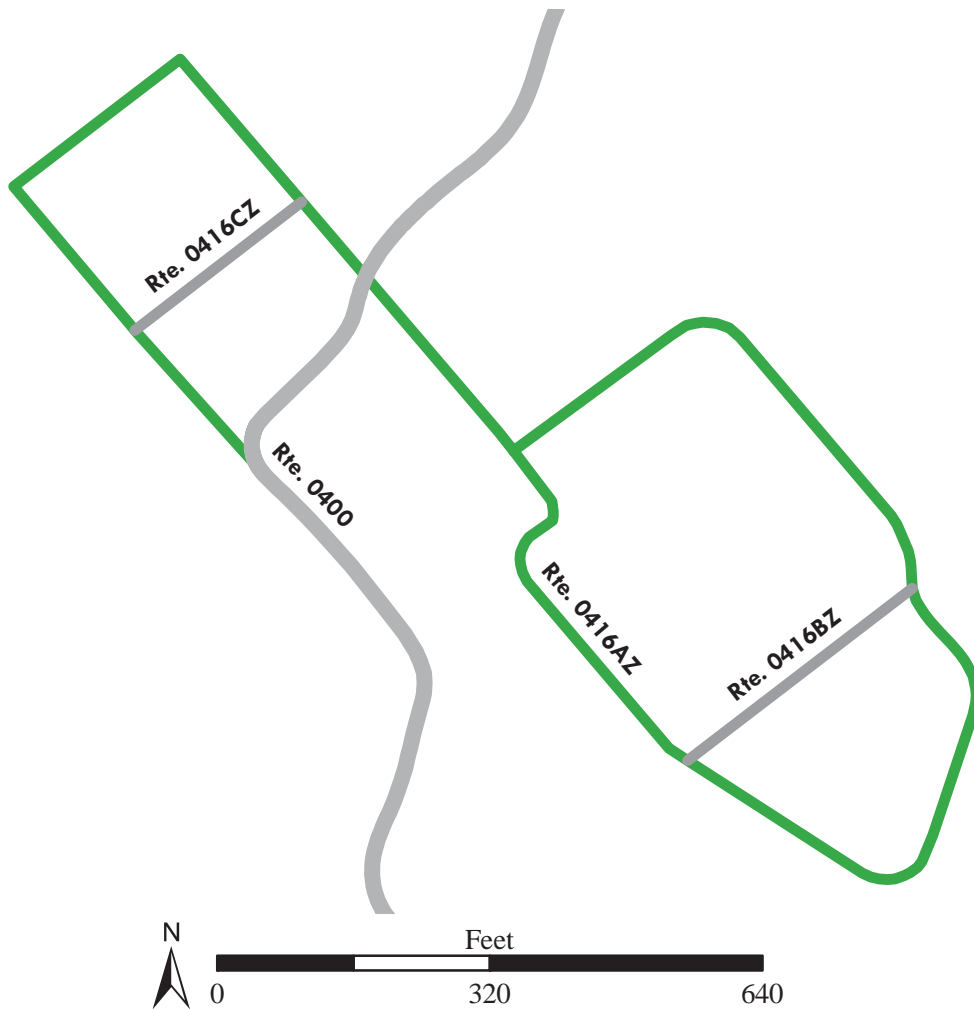
Subcomponent of Route HAVO-0416ZZ

Manual Rating

FROM GRAVEL PILE AND ROUTE 0400 (WATER TANK ROAD)

TO END OF LOOP

| Inspection Date | FMSS Number | User Access | Surface Type |
|--|-------------------------|--|--------------|
| 4/21/2014 | 21519 | NONPUBLIC | ASPHALT |
| Paved Length (mi.) / Width (ft.) | Lane Miles (11' Widths) | Condition Rating / PCR / Pavement Recommendation | |
| 0.58 miles / 14 feet | 0.74 | GOOD / 90 / PREVENTIVE MAINTENANCE | |
| Curb Type | | Curb & Gutter Type | |
| NO CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 3 | 1 | 2 | |
| Route Condition Legend – Pavement Condition Rating (PCR) Poor (0 - 60) Fair (61 - 84) Good (85 - 94) Excellent (95 - 100) Not Rated See Appendix for definitions and formulas | | | |



Hawaii Volcanoes National Park
ROUTE 0416AZ: KILAUEA WATER TANKS AREA ROAD A
Condition Photos



HAVO_0416AZ_7703.JPG



HAVO_0416AZ_7704.JPG



HAVO_0416AZ_7706.JPG



HAVO_0416AZ_7707.JPG



HAVO_0416AZ_7708.JPG



HAVO_0416AZ_7709.JPG

Hawaii Volcanoes National Park

ROUTE 0416BZ: KILAUEA WATER TANKS AREA ROAD B

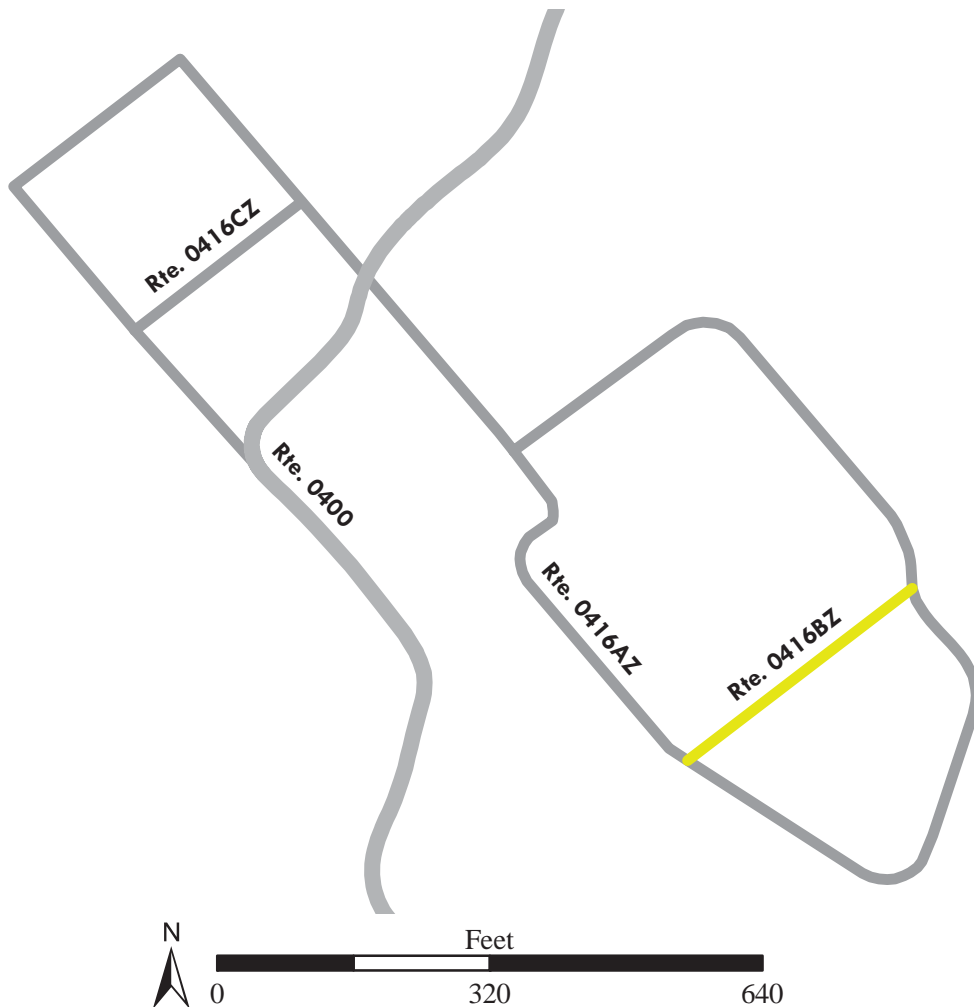
Subcomponent of Route HAVO-0416ZZ

Manual Rating

FROM ROUTE 0416AZ (KILAUEA WATER TANKS AREA ROAD A) ON LEFT

TO ROUTE 0416AZ (KILAUEA WATER TANKS AREA ROAD A) ON LEFT

| Inspection Date | FMSS Number | User Access | Surface Type |
|--|-------------------------|--|--------------|
| 4/21/2014 | 21519 | NONPUBLIC | ASPHALT |
| Paved Length (mi.) / Width (ft.) | Lane Miles (11' Widths) | Condition Rating / PCR / Pavement Recommendation | |
| 0.06 miles / 12 feet | 0.07 | FAIR / 73 / LIGHT 3R TREATMENTS | |
| Curb Type | | Curb & Gutter Type | |
| RECYCLED PLASTIC LUMBER CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Route Condition Legend – Pavement Condition Rating (PCR) Poor (0 - 60) Fair (61 - 84) Good (85 - 94) Excellent (95 - 100) Not Rated See Appendix for definitions and formulas | | | |



Hawaii Volcanoes National Park
ROUTE 0416BZ: KILAUEA WATER TANKS AREA ROAD B
Condition Photos



HAVO_0416BZ_7719.JPG



HAVO_0416BZ_7720.JPG



HAVO_0416BZ_7721.JPG

Hawaii Volcanoes National Park

ROUTE 0416CZ: KILAUEA WATER TANKS AREA ROAD C

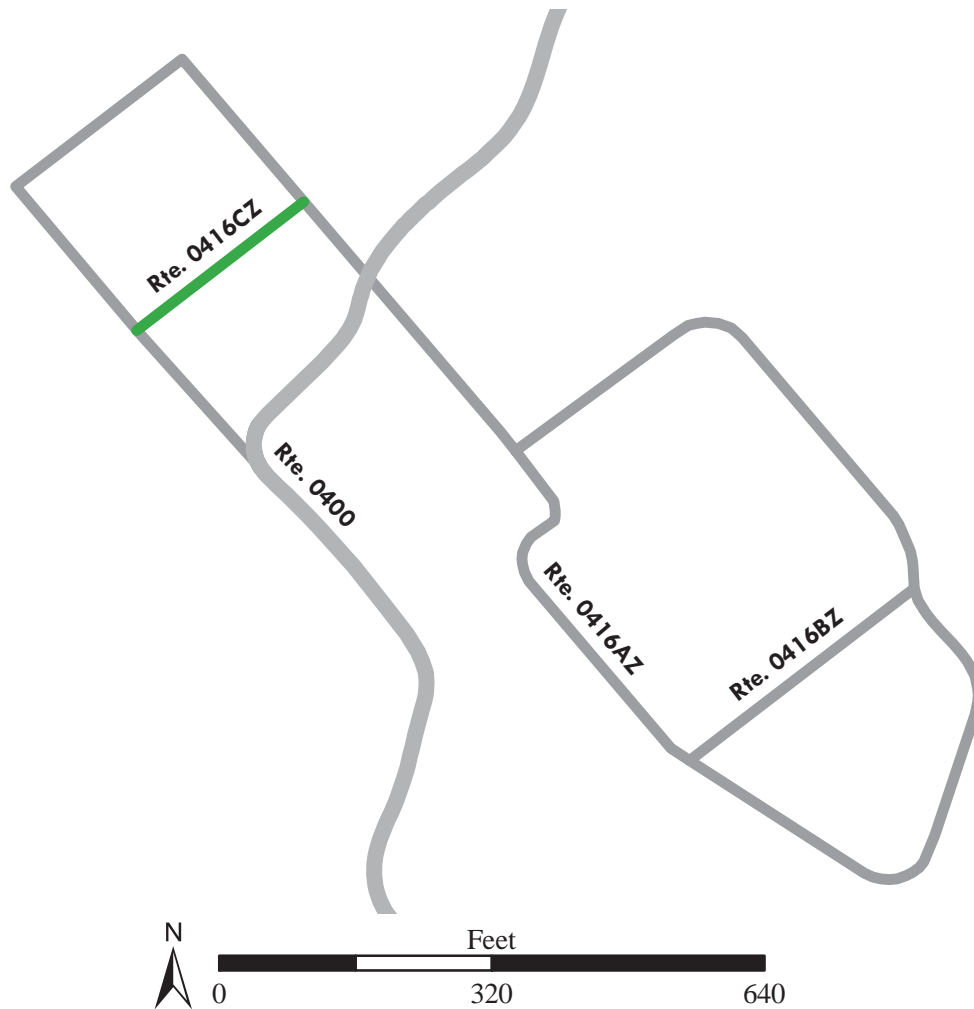
Subcomponent of Route HAVO-0416ZZ

Manual Rating

FROM ROUTE 0416AZ (KILAUEA WATER TANKS AREA ROAD A) ON RIGHT

TO ROUTE 0416AZ (KILAUEA WATER TANKS AREA ROAD A) ON RIGHT

| Inspection Date | FMSS Number | User Access | Surface Type |
|--|-------------------------|--|--------------|
| 4/21/2014 | 21519 | NONPUBLIC | ASPHALT |
| Paved Length (mi.) / Width (ft.) | Lane Miles (11' Widths) | Condition Rating / PCR / Pavement Recommendation | |
| 0.05 miles / 16.5 feet | 0.07 | GOOD / 90 / PREVENTIVE MAINTENANCE | |
| Curb Type | | Curb & Gutter Type | |
| NO CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Route Condition Legend – Pavement Condition Rating (PCR) Poor (0 - 60) Fair (61 - 84) Good (85 - 94) Excellent (95 - 100) Not Rated See Appendix for definitions and formulas | | | |



Hawaii Volcanoes National Park
ROUTE 0416CZ: KILAUEA WATER TANKS AREA ROAD C
Condition Photos



HAVO_0416CZ_7705.JPG



HAVO_0416CZ_7711.JPG



HAVO_0416CZ_7712.JPG



HAVO_0416CZ_7713.JPG

Hawaii Volcanoes National Park

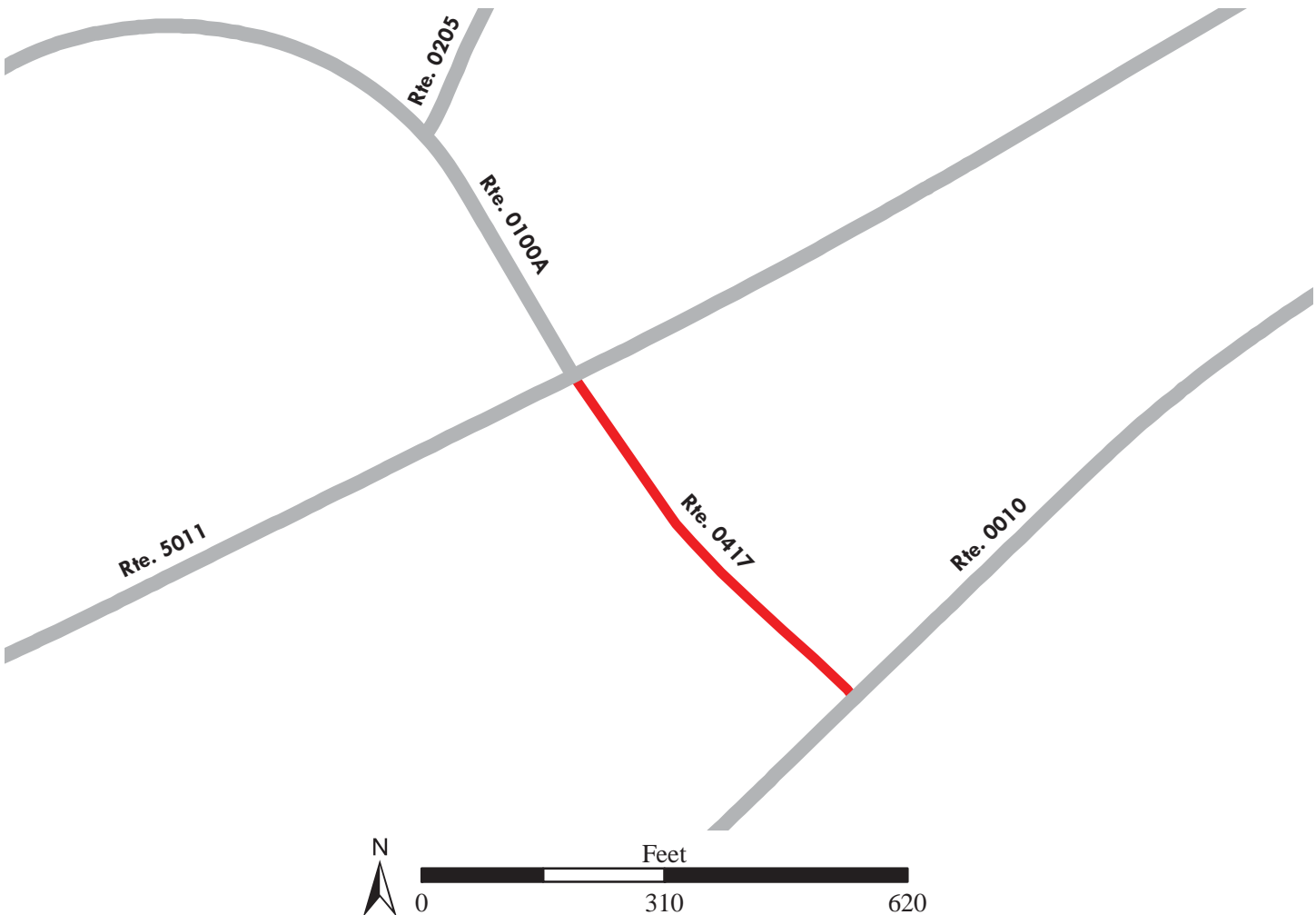
ROUTE 0417: MAUNA LOA EMERGENCY ACCESS ROAD

Manual Rating

FROM ROUTE 0010 (CRATER RIM DRIVE)

TO INTERSECTION WITH ROUTES 0100A (MAUNA LOA ROAD) AND 5011 (HAWAII STATE ROUTE 11
(HAWAII BELT ROAD / MAMALAHOA HIGHWAY))

| Inspection Date | FMSS Number | User Access | Surface Type |
|--|-------------------------|--|--------------|
| 4/21/2014 | 23386 | NONPUBLIC | ASPHALT |
| Paved Length (mi.) / Width (ft.) | Lane Miles (11' Widths) | Condition Rating / PCR / Pavement Recommendation | |
| 0.10 miles / 20 feet | 0.18 | POOR / 53 / HEAVY 3R TREATMENTS | |
| Curb Type | | Curb & Gutter Type | |
| NO CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 1 | |
| Route Condition Legend – Pavement Condition Rating (PCR) Poor (0 - 60) Fair (61 - 84) Good (85 - 94) Excellent (95 - 100) Not Rated See Appendix for definitions and formulas | | | |



Hawaii Volcanoes National Park
ROUTE 0417: MAUNA LOA EMERGENCY ACCESS ROAD
Condition Photos



HAVO_0417_7725.JPG



HAVO_0417_7726.JPG



HAVO_0417_7727.JPG



HAVO_0417_7728.JPG



HAVO_0417_7729.JPG



HAVO_0417_7731.JPG

Hawaii Volcanoes National Park

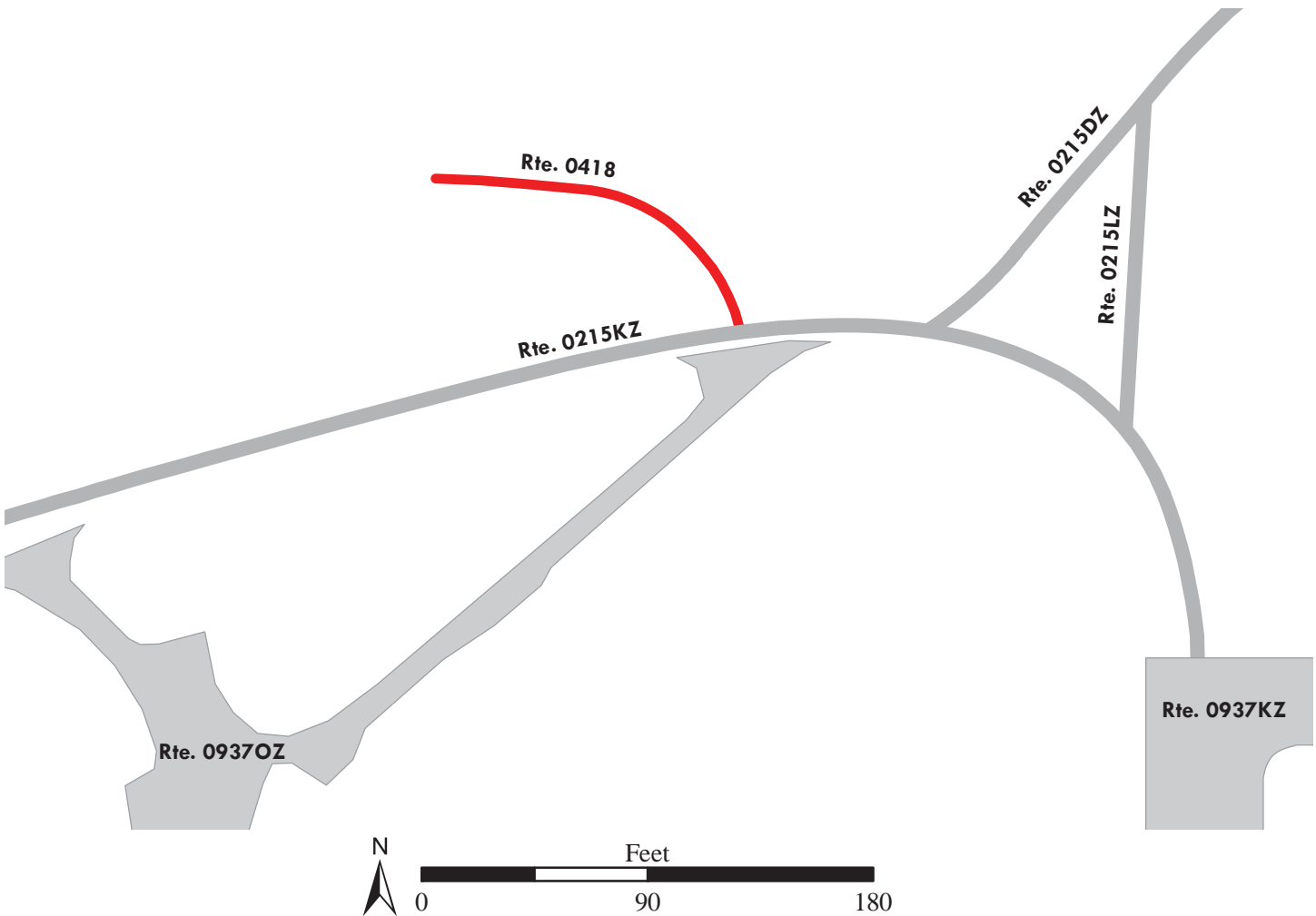
ROUTE 0418: KILAUEA MILITARY CAMP WATER TANK ROAD

Manual Rating

FROM ROUTE 0215ZZ (KILAUEA MILITARY CAMP ROADS)

TO KILAUEA MILITARY CAMP WATER TANK

| Inspection Date | FMSS Number | User Access | Surface Type |
|--|-------------------------|--|--------------|
| 4/19/2014 | NOT AVAILABLE | NONPUBLIC | CONCRETE |
| Paved Length (mi.) / Width (ft.) | Lane Miles (11' Widths) | Condition Rating / PCR / Pavement Recommendation | |
| 0.03 miles / 10 feet | 0.03 | POOR / 30 / RECONSTRUCTION | |
| Curb Type | | Curb & Gutter Type | |
| NO CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 1 | |
| Route Condition Legend – Pavement Condition Rating (PCR) Poor (0 - 60) Fair (61 - 84) Good (85 - 94) Excellent (95 - 100) Not Rated See Appendix for definitions and formulas | | | |



Hawaii Volcanoes National Park
ROUTE 0418: KILAUEA MILITARY CAMP WATER TANK ROAD
Condition Photos



HAVO_0418_7640.JPG



HAVO_0418_7641.JPG



HAVO_0418_7642.JPG



HAVO_0418_7643.JPG



HAVO_0418_7644.JPG

SECTION 6B

MANUALLY RATED PAVED ROUTE CONDITION RATING SHEETS

FROM

JANUARY 2012

Hawaii Volcanoes National Park

MRP Route 0204B

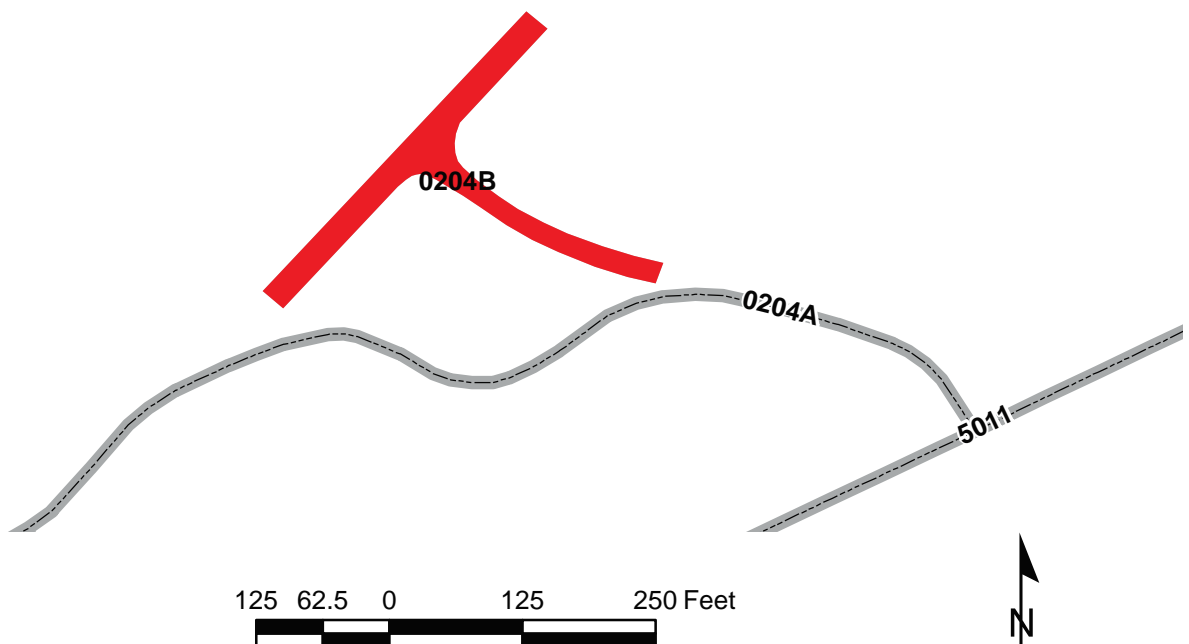
NAMAKANI PAIO RENTAL CABIN ACCESS ROAD
 FROM ROUTE 0204A (NAMAKANI PAIO CAMPGROUND ROAD) AT MP 0.05 ON RIGHT
 THROUGH RENTAL CABINS

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0204B | PUBLIC | 1/18/2012 | 13795 | 0.238 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | NO | 45 POOR |

* Lane miles are based on 11' lane widths



2012 RATING



Hawaii Volcanoes National Park

MRL Route 0213

KAHUKU ROAD

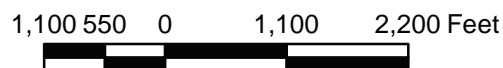
FROM HAWAII STATE ROUTE 11 (HAWAII BELT ROAD / MAMALAHOA HIGHWAY)
TO ROUTE 0934 (KAHUKU ADMINISTRATIVE PARKING)

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Paved Length (mi) | Paved Width (ft) |
|--------------|---------------------|--------------|---------------|--------------|-------------------|------------------|
| 0213 | PUBLIC | 1/18/2012 | N/A | 0.889 | 0.56 | 17.6 |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR | Surface Type |
| N/A | N/A | N/A | NO | NO | 45 POOR | AS |

* Lane miles are based on 11' lane widths



2012 RATING



Hawaii Volcanoes National Park Route 0215ZZ Summary Record

KILAUEA MILITARY CAMP ROADS

FROM ROUTE 0010 (CRATER RIM DRIVE) AND 0214 (KILAUEA MILITARY CAMP ROAD)
THROUGH KILAUEA MILITARY CAMP

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|----------------|
| 0215ZZ | PUBLIC | 1/17/2012 | N/A | 0.279 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| N/A | N/A | N/A | N/A | N/A | N/A SUMMARY |

* Lane miles are based on 11' lane widths

*NOTE: Route 0215ZZ consists of 12 routes, 11 of those are Data Collection Vehicle (DCV) routes. 0215FZ is the only subcomponent of 0215ZZ that has been collected thus far in Cycle 5.



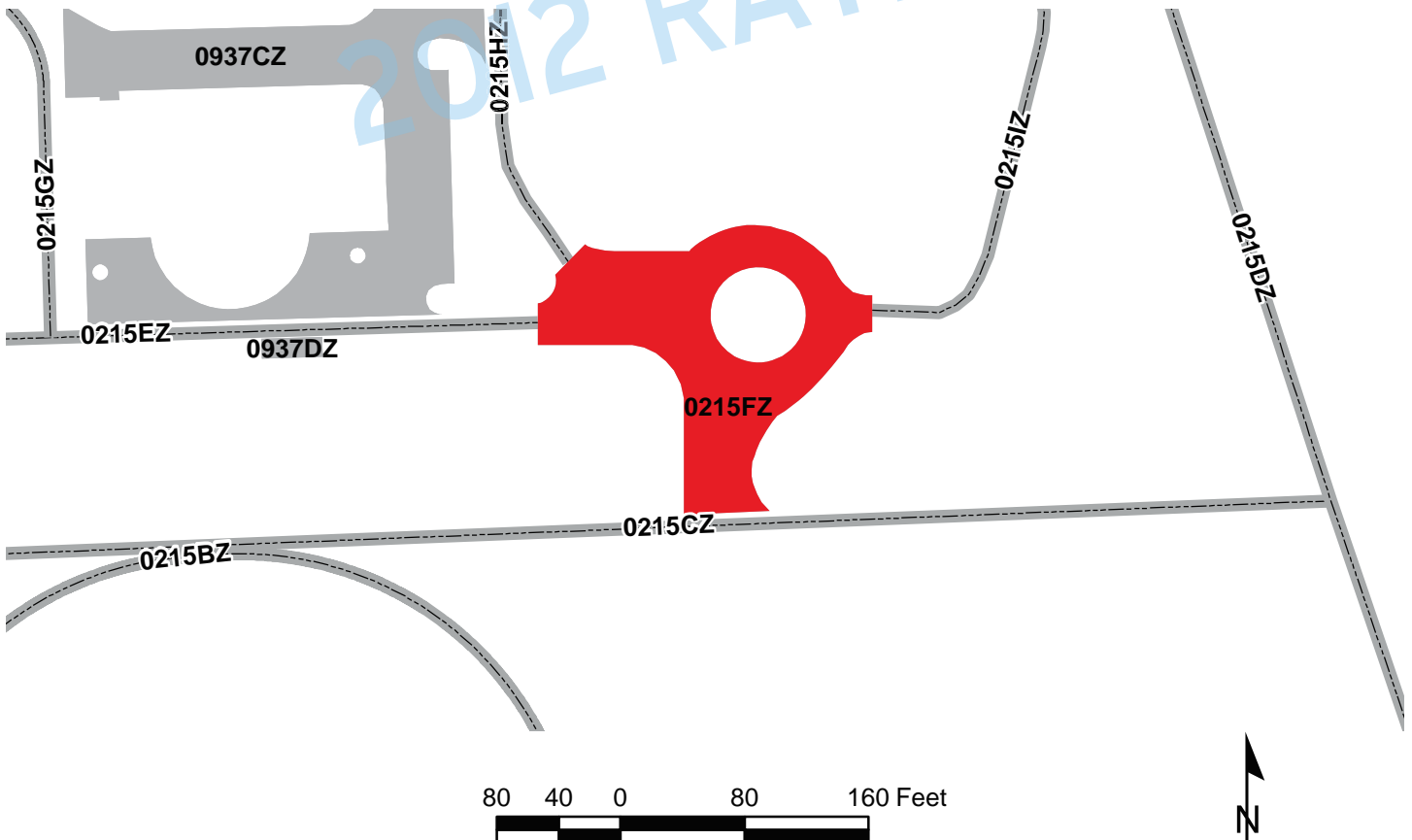
Hawaii Volcanoes National Park

MRP Route 0215FZ Subcomponent Record

KILAUEA MILITARY CAMP ROAD F
 FROM ROUTE 0215CZ (KILAUEA MILITARY CAMP ROAD C)
 TO ROUTES 0215EZ (KILAUEA MILITARY CAMP ROAD E),
 0215HZ (KILAUEA MILITARY CAMP ROAD H),
 AND 0215IZ (KILAUEA MILITARY CAMP ROAD I)

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Length (mi) | Width (ft) |
|--------------|---------------------|--------------|---------------|--------------|-------------|--------------|
| 0215FZ | PUBLIC | 1/17/2012 | 16219 | 0.279 | 0 | 0 |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR | Surface Type |
| 0 | 1 | 0 | NO | STONE | 73 FAIR | AS |

* Lane miles are based on 11' lane widths



Hawaii Volcanoes National Park

MRL Route 0404

TREE MOLDS STABLE ROAD

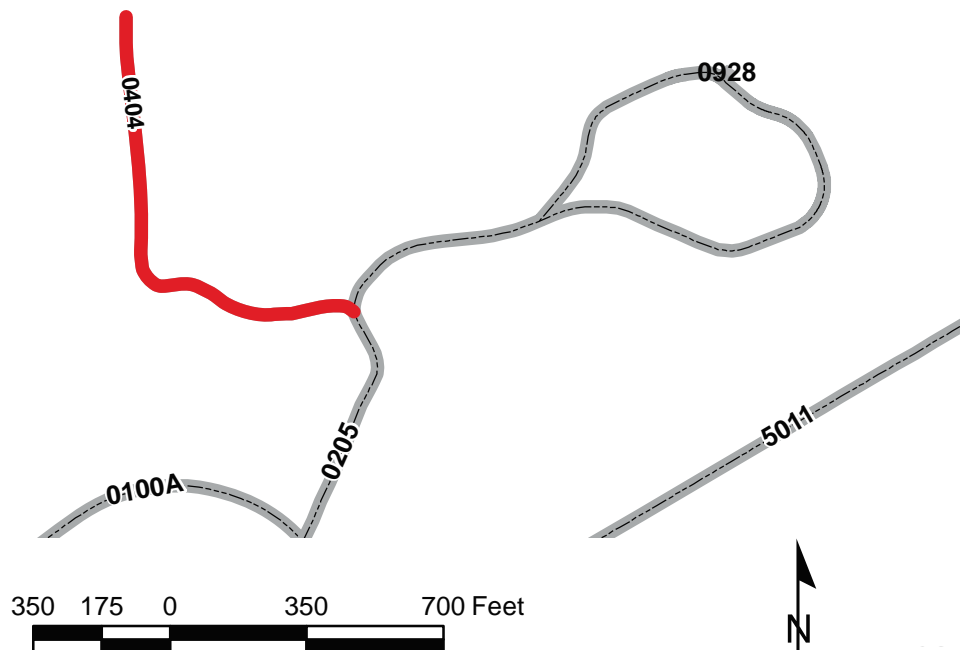
FROM ROUTE 0205 (TREE MOLDS ROAD) AT MP 0.12 ON LEFT
TO END OF LOOP

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Paved Length (mi) | Paved Width (ft) |
|--------------|---------------------|--------------|---------------|--------------|-------------------|------------------|
| 0404 | PUBLIC | 1/18/2012 | 11986 | 0.206 | 0.23 | 10 |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR | Surface Type |
| 0 | 0 | 1 | NO | NO | 45 POOR | AS |

* Lane miles are based on 11' lane widths



2012 RATING



Hawaii Volcanoes National Park

MRL Route 0405

AINAHOU ROAD

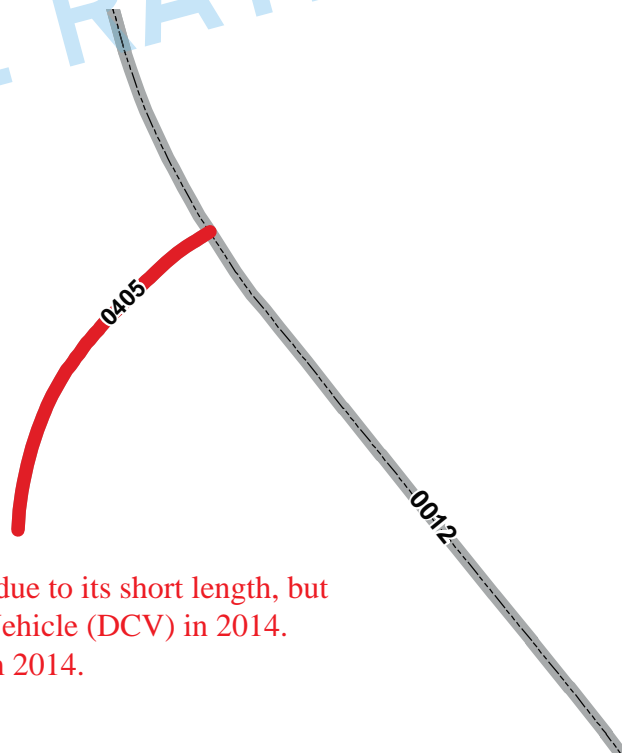
FROM ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 4.30 ON RIGHT
TO TRAILHEAD AT RANCH HOUSE

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Paved Length (mi) | Paved Width (ft) |
|--------------|---------------------|--------------|---------------|--------------|-------------------|------------------|
| 0405 | PUBLIC | 1/17/2012 | 5107 | 0.088 | 0.06 | 15.6 |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR | Surface Type |
| 0 | 0 | 1 | NO | NO | 90 GOOD | AS |

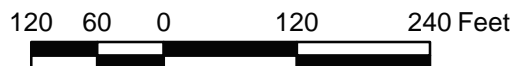
* Lane miles are based on 11' lane widths



2012 RATING



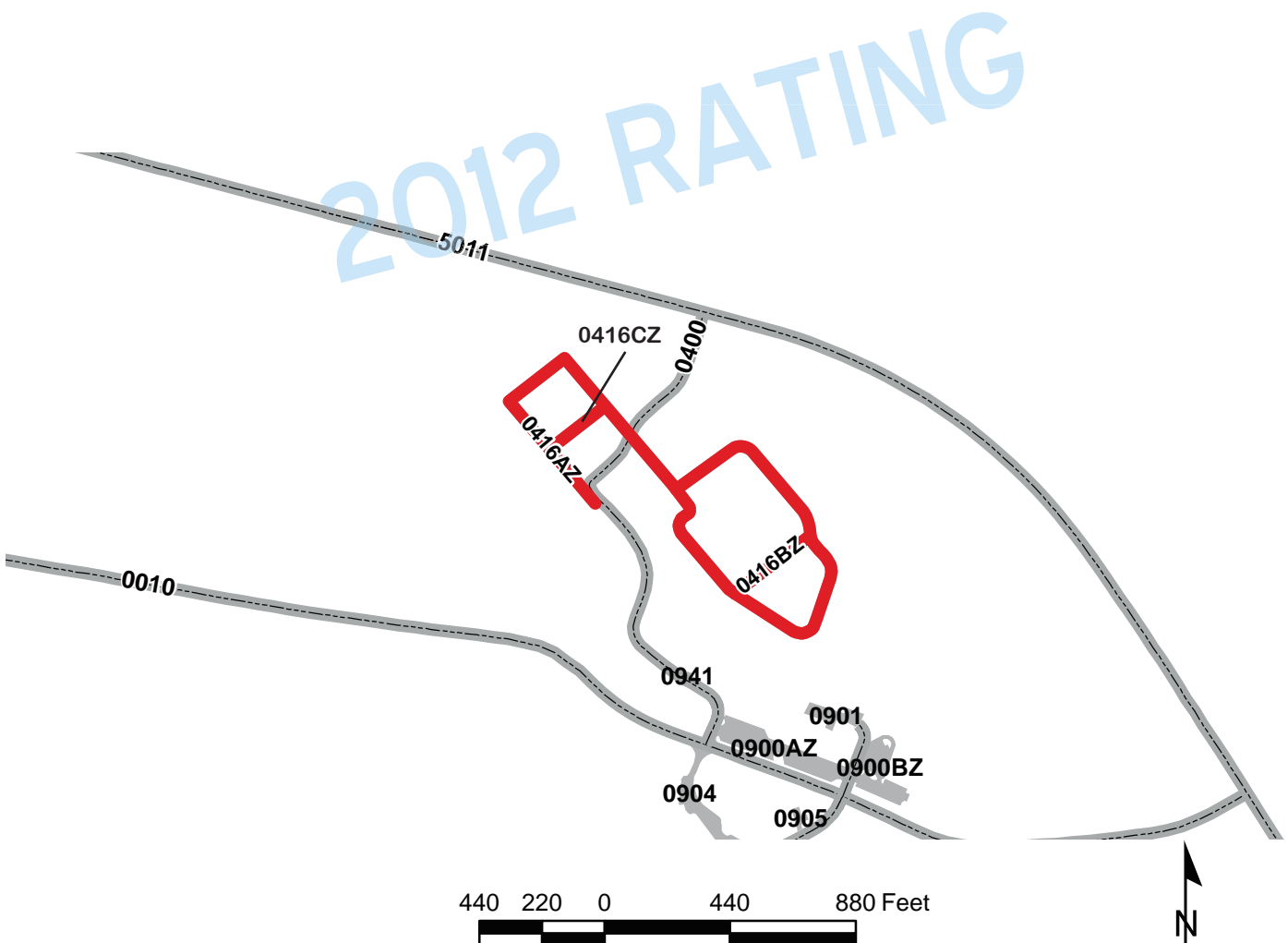
Route 0405 was manually rated in 2012 due to its short length, but was collected with the Data Collection Vehicle (DCV) in 2014. See Section 5 for the updated rating from 2014.



Hawaii Volcanoes National Park
MRL Route 0416ZZ Summary Record
KILAUEA WATER TANKS AREA ROADS
 FROM GRAVEL PILE
 TROUGH WATER TANK AREA

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Paved Length (mi) | Paved Width (ft) |
|--------------|---------------------|--------------|---------------|--------------|-------------------|------------------|
| 0416ZZ | NONPUBLIC | 1/18/2012 | 50733 | 0.873 | 0.69 | 14 |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR | Surface Type |
| 1 | 1 | 2 | NO | NO | 89 | AS |
| SUMMARY | | | | | | |

* Lane miles are based on 11' lane widths

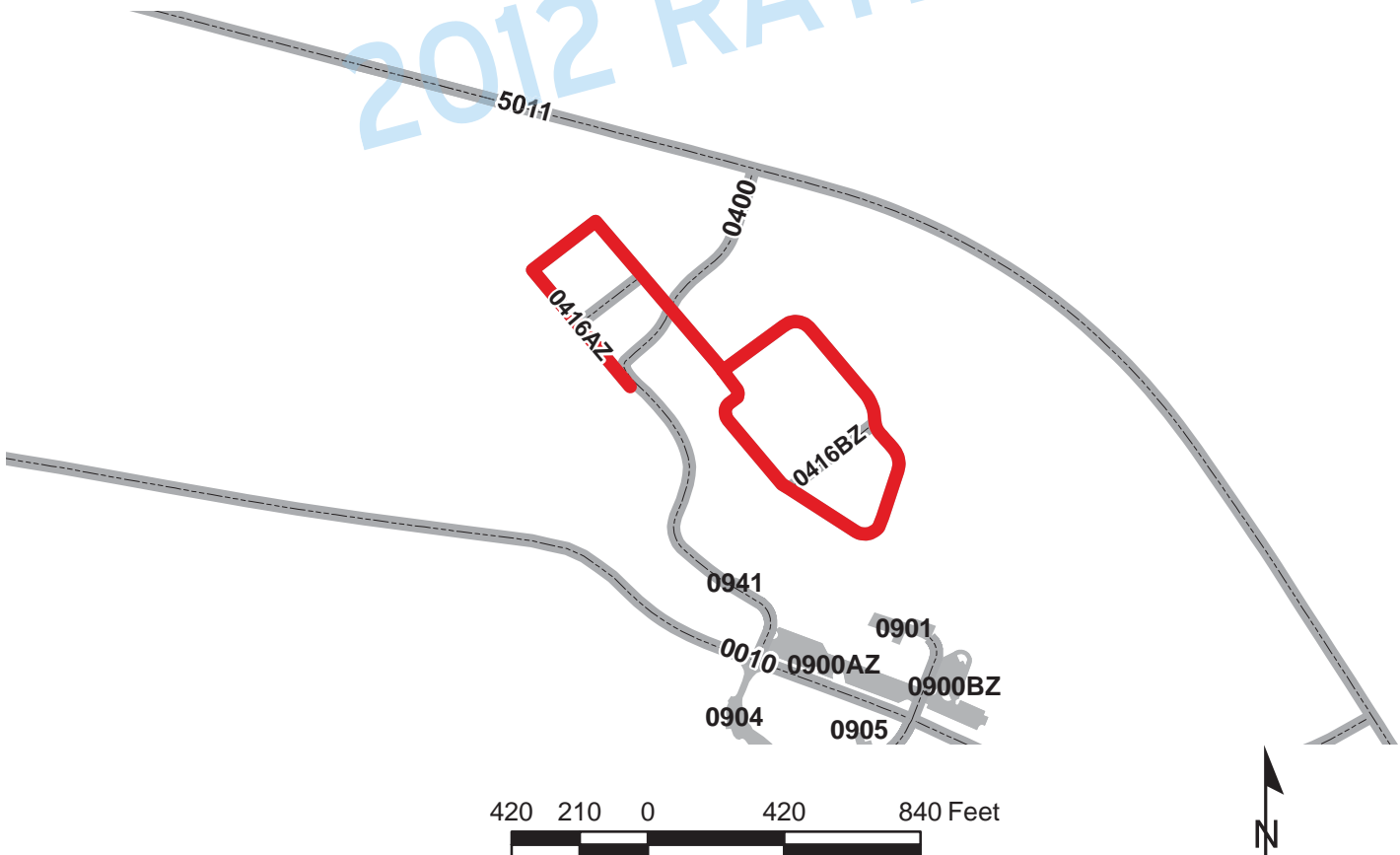


Hawaii Volcanoes National Park MRL Route 0416AZ Subcomponent Record KILAUEA WATER TANKS AREA ROAD A

FROM GRAVEL PILE
TO END OF LOOP

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles ** | Paved Length (mi) | Paved Width (ft) |
|--------------|---------------------|--------------|---------------|-------------------------------|-------------------|------------------|
| 0416AZ | NONPUBLIC | 1/18/2012 | 42948 | 0.739 | 0.58 | 14 |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR | Surface Type |
| 1 | 1 | 2 | NO | RECYCLED PLASTIC LUMBER | 90 GOOD | AS |

* Lane miles are based on 11' lane widths



Hawaii Volcanoes National Park

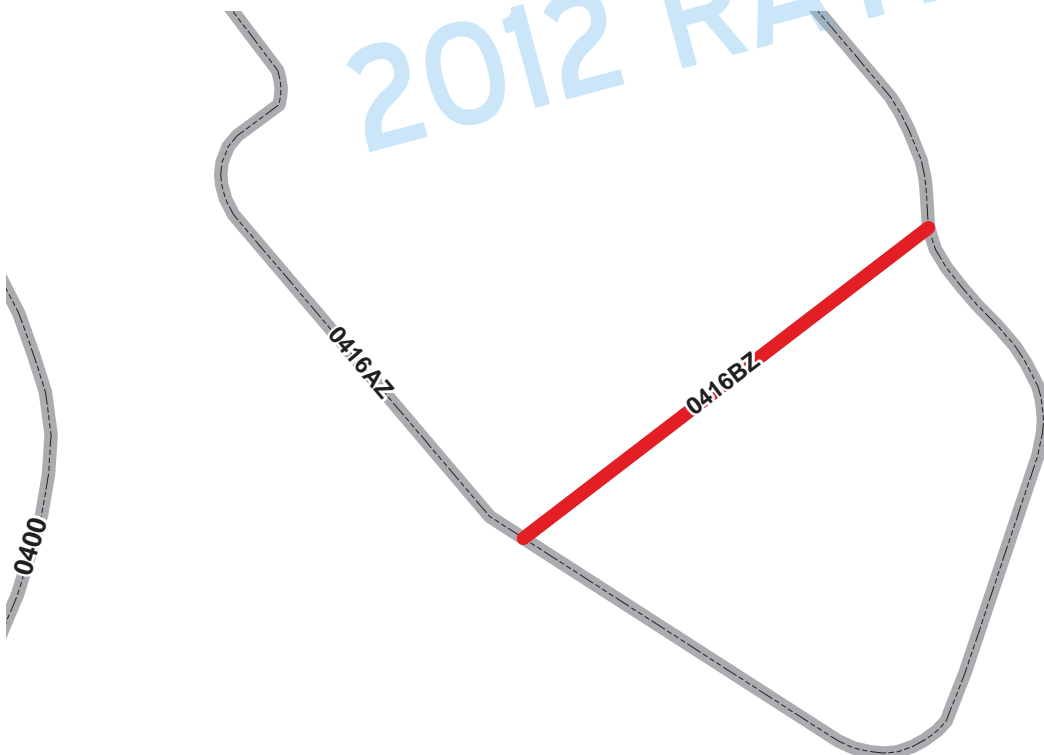
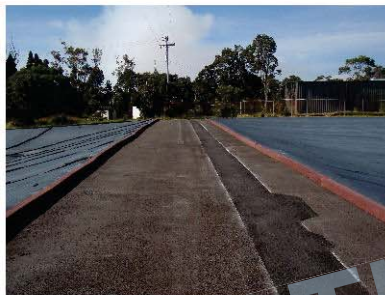
MRL Route 0416BZ Subcomponent Record

KILAUEA WATER TANKS AREA ROAD B

FROM ROUTE 0416AZ (KILAUEA WATER TANKS AREA ROAD A) ON LEFT
TO ROUTE 0416AZ (KILAUEA WATER TANKS AREA ROAD A) ON LEFT

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles ** | Paved Length (mi) | Paved Width (ft) |
|--------------|---------------------|--------------|---------------|-------------------------------|-------------------|------------------|
| 0416BZ | NONPUBLIC | 1/18/2012 | 3865 | 0.067 | 0.06 | 12 |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR | Surface Type |
| 0 | 0 | 0 | NO | RECYCLED PLASTIC LUMBER | 73 FAIR | AS |

* Lane miles are based on 11' lane widths



2012 RATING



Hawaii Volcanoes National Park
MRL Route 0416CZ Subcomponent Record
KILAUEA WATER TANKS AREA ROAD C

FROM ROUTE 0416AZ (KILAUEA WATER TANKS AREA ROAD A) ON RIGHT
 TO ROUTE 0416AZ (KILAUEA WATER TANKS AREA ROAD A) ON RIGHT

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Paved Length (mi) | Paved Width (ft) |
|--------------|---------------------|--------------|---------------|--------------|-------------------|------------------|
| 0416CZ | NONPUBLIC | 1/18/2012 | 3920 | 0.068 | 0.05 | 16.5 |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR | Surface Type |
| 0 | 0 | 0 | NO | NO | 90 GOOD | AS |

* Lane miles are based on 11' lane widths



Hawaii Volcanoes National Park
MRL Route 0418
KILAUEA MILITARY CAMP WATER TANK ROAD
 FROM ROUTE 0215ZZ (KILAUEA MILITARY CAMP ROADS)
 TO KILAUEA MILITARY CAMP WATER TANK

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Paved Length (mi) | Paved Width (ft) |
|--------------|---------------------|--------------|---------------|--------------|-------------------|------------------|
| 0418 | NONPUBLIC | 1/17/2012 | 1426 | 0.025 | 0.03 | 10 |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR | Surface Type |
| 0 | 0 | 1 | NO | NO | 45 POOR | CO |

* Lane miles are based on 11' lane widths



2012 RATING



Section 7
Parking Area
Condition Rating Sheets



Hawaii Volcanoes National Park



Federal Lands Highway
Road Inventory Program

Hawaii Volcanoes National Park

PARKING AREA CONDITION RATING SHEETS

Parking areas at Hawaii Volcanoes National Park (HAVO) were collected twice in Cycle 5 by the Road Inventory Program (RIP).

- January 2012: First manual collection (no automated vehicle collection)
- April 2014: Automated vehicle and second manual collection

Following the 2012 data collection effort, the RIP Automated Data Collection Vehicle (DCV) visited Hawaii in April of 2014 to perform automated collection on all NPS paved roads. During the DCV collection visit, a second manual condition assessment was performed on parking areas and manually rated roads and the previous Cycle 5 manual condition ratings were updated.

The 2014 condition assessment at HAVO incorporated new manual rating methodologies designed to improve the identification of treatment recommendations and pavement condition descriptions for Manually Rated Routes. These new methodologies will be used in future Cycle 6 collections and were included in this 2014 Final Cycle 5 Report. A detailed description of the new manual rating procedures can be found in the Appendix of this Report.

To facilitate comparisons of the 2012 and 2014 manual ratings, both condition rating sheets for each route are included in this final Cycle 5 Report.

- Section 7A: Updated Ratings from April of 2014
- Section 7B: Previous Ratings from January of 2012

SECTION 7A

PARKING AREA CONDITION RATING SHEETS

FROM

APRIL 2014

Hawaii Volcanoes National Park

ROUTE 0900ZZ: KILAUEA VISITORS CENTER PARKING AREAS

Summary Route

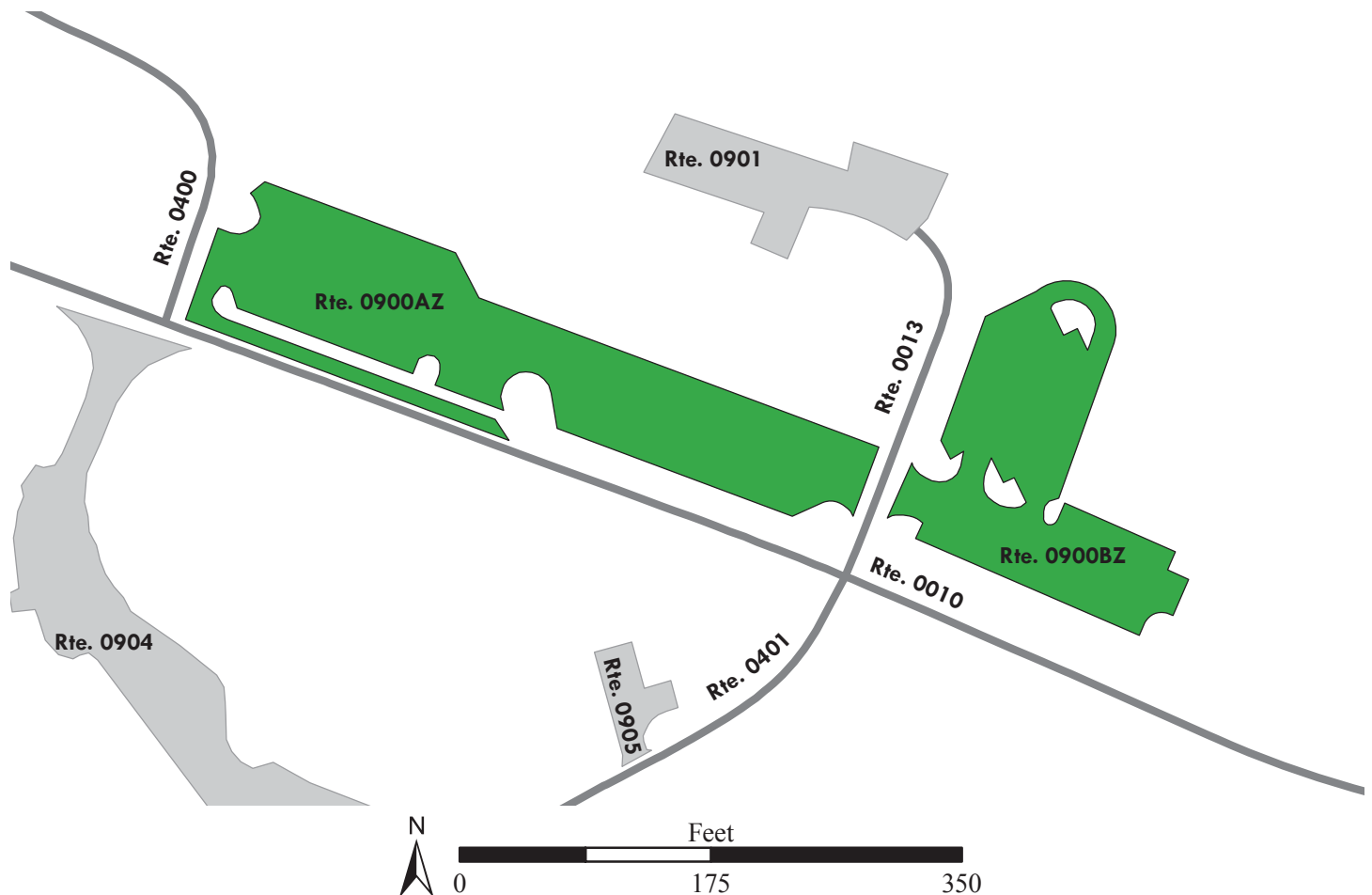
Manual Rating

FROM ROUTE 0013 (OFFICE AREA STREET)

TO ROUTE 0400 (WATER TANK ROAD)

| Inspection Date | FMSS Number | User Access | Surface Type |
|--|--|------------------------|---|
| 4/9/2014 | 22571 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Condition Rating / PCR | |
| 55,078 | 0.95 | SUMMARY / 90 | |
| Culverts | Drop Inlets | Gates | |
| 0 | 6 | 0 | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | |
| Poor | (0 - 60) | Fair | (61 - 84) |
| | | Good | (85 - 94) |
| | | Excellent | (95 - 100) |
| | | Not Rated | |
| See Appendix for definitions and formulas | | | |

The condition shown on this page reflects the overall condition; it may not reflect individual subcomponent condition ratings.



Hawaii Volcanoes National Park

ROUTE 0900AZ: KILAUEA VISITORS CENTER PARKING AREA A

Subcomponent of Route HAVO-0900ZZ

Manual Rating

FROM ROUTE 0013 (OFFICE AREA STREET) AT MP 0.01 ON LEFT

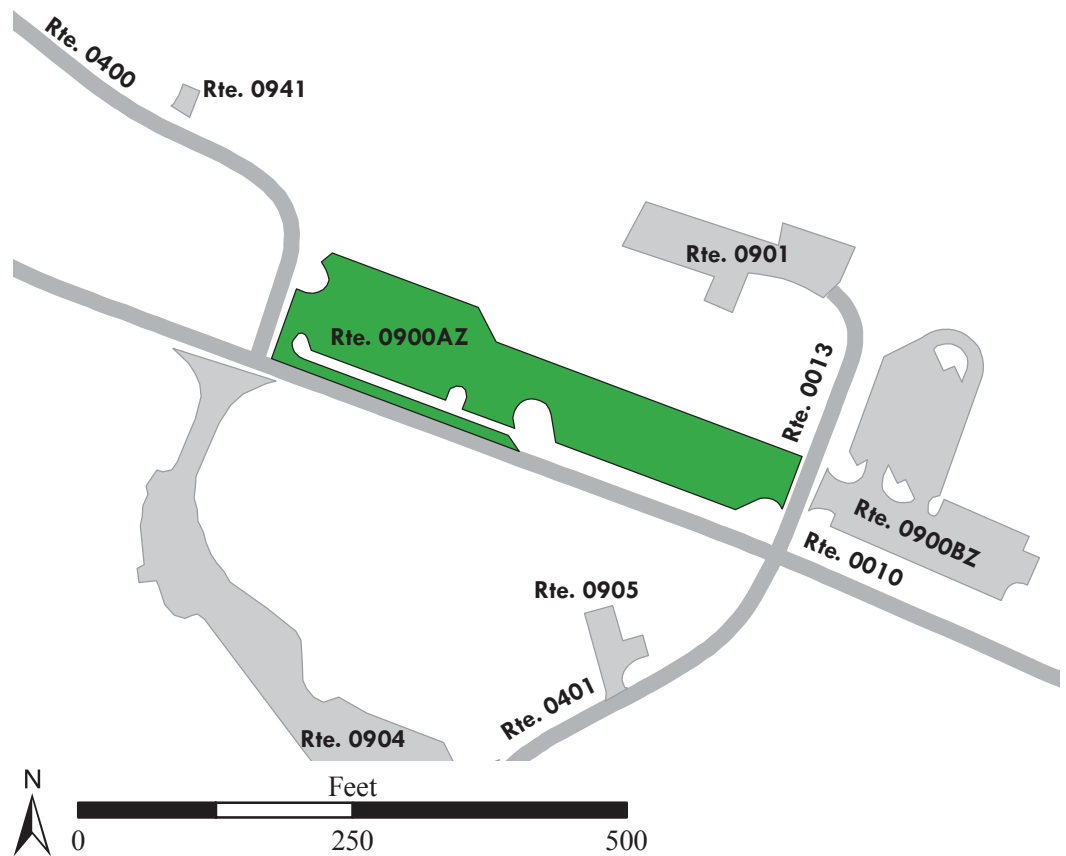
TO ROUTE 0400 (WATER TANK ROAD) AT MP 0.01 ON RIGHT

| Inspection Date | FMSS Number | User Access | Surface Type |
|-------------------------|-------------------------|------------------------|---------------------|
| 4/9/2014 | 22571 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 33,894 | 0.58 | 5 | LIGHT REPAIR |
| Curb Type | | Curb & Gutter Type | |
| STONE CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 5 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| PREVENTIVE MAINTENANCE | | GOOD / 90 | |

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60) Fair (61 - 84) Good (85 - 94) Excellent (95 - 100) Not Rated

See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0900BZ: KILAUEA VISITORS CENTER PARKING AREA B

Subcomponent of Route HAVO-0900ZZ

Manual Rating

FROM ROUTE 0013 (OFFICE AREA STREET) AT MP 0.01 ON RIGHT

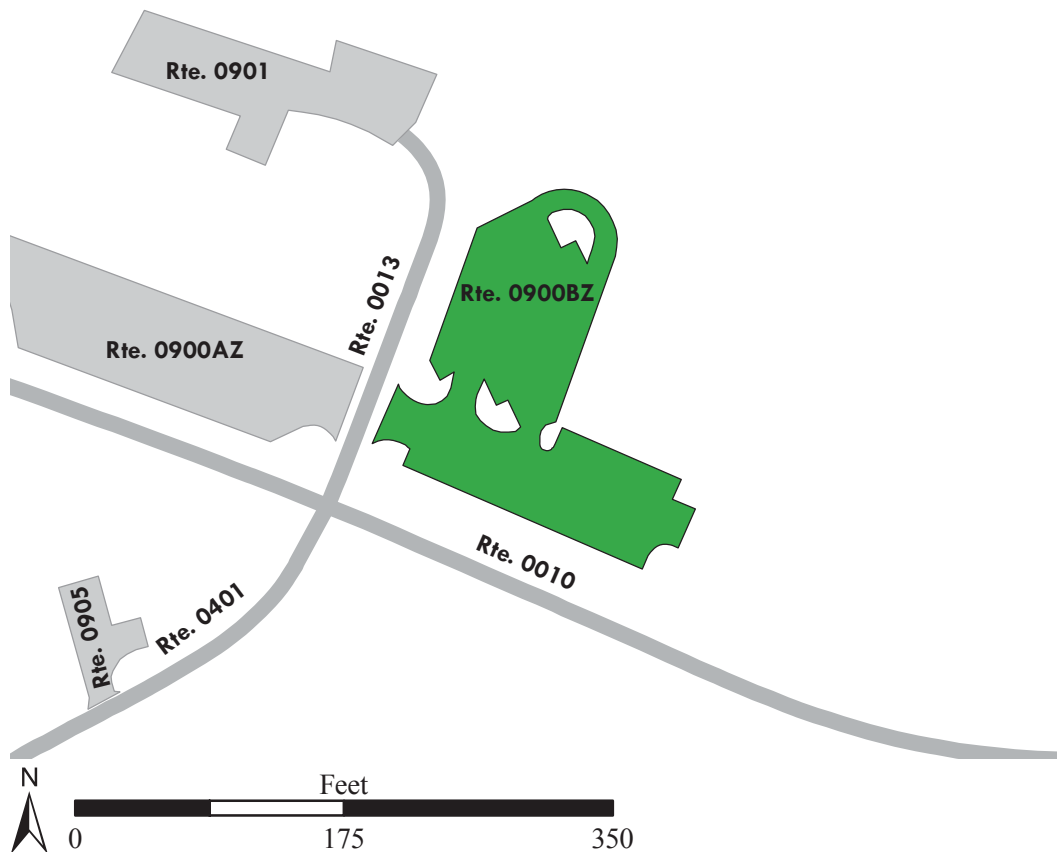
TO PARKING

| Inspection Date | FMSS Number | User Access | Surface Type |
|-------------------------|-------------------------|------------------------|---------------------|
| 4/9/2014 | 22571 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 21,184 | 0.36 | 5 | LIGHT REPAIR |
| Curb Type | | Curb & Gutter Type | |
| STONE CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 1 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| PREVENTIVE MAINTENANCE | | GOOD / 90 | |

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60) Fair (61 - 84) Good (85 - 94) Excellent (95 - 100) Not Rated

See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0901: KILAUEA VISITORS CENTER ADMINISTRATIVE PARKING

Manual Rating

FROM END OF ROUTE 0013 (OFFICE AREA STREET)

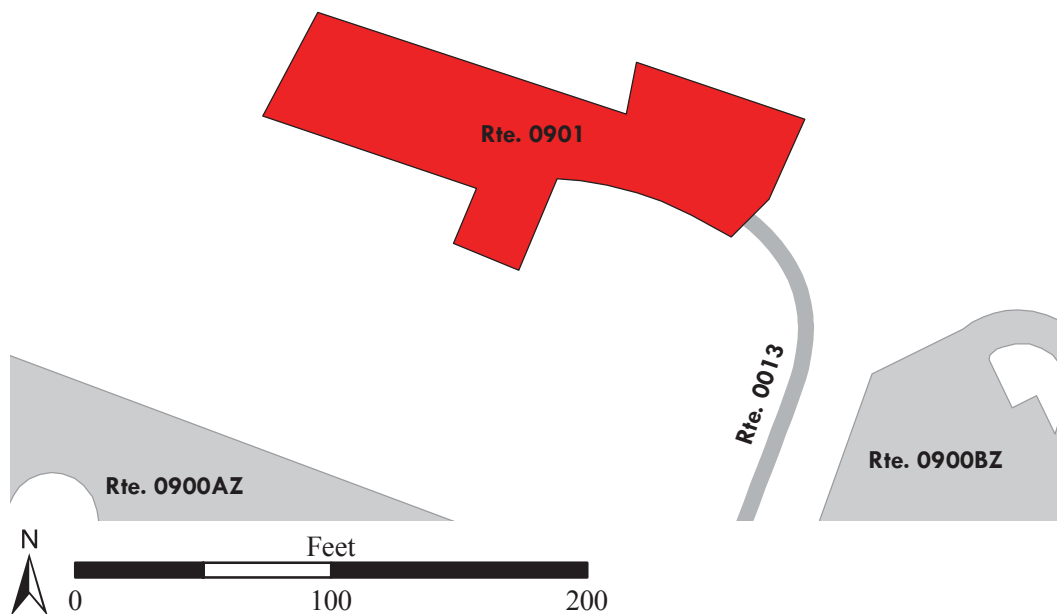
TO PARKING

| Inspection Date | FMSS Number | User Access | Surface Type |
|-------------------------|-------------------------|------------------------|---------------------|
| 4/9/2014 | 42652 | NONPUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 8,970 | 0.15 | 5 | LIGHT REPAIR |
| Curb Type | | Curb & Gutter Type | |
| STONE CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| HEAVY 3R TREATMENTS | | POOR / 53 | |

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60) Fair (61 - 84) Good (85 - 94) Excellent (95 - 100) Not Rated

See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0904: VOLCANO HOUSE PARKING

Manual Rating

FROM ROUTE 0010 (CRATER RIM DRIVE) AT MP 0.35 ON LEFT

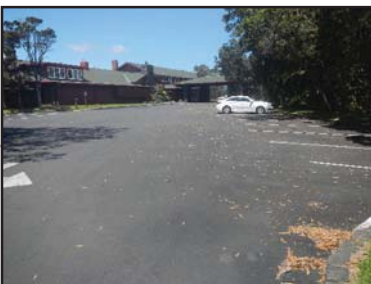
TO ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.06 ON RIGHT

| Inspection Date | FMSS Number | User Access | Surface Type |
|-------------------------|-------------------------|------------------------|---------------------|
| 4/9/2014 | 22490 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 25,868 | 0.45 | 4 | LIGHT REPAIR |
| Curb Type | | Curb & Gutter Type | |
| STONE CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 1 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| DO NOTHING | | EXCELLENT / 97 | |

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60) Fair (61 - 84) Good (85 - 94) Excellent (95 - 100) Not Rated

See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0905: OHIA WING PARKING

Manual Rating

FROM ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.037 ON RIGHT

TO PARKING

| Inspection Date | FMSS Number | User Access | Surface Type | | | | | | |
|--|-------------------------|------------------------|---------------------|------|-----------|-----------|------------|-----------|--|
| 4/9/2014 | 109031 | NONPUBLIC | ASPHALT | | | | | | |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation | | | | | | |
| 2,196 | 0.04 | 4 | LIGHT REPAIR | | | | | | |
| Curb Type | | Curb & Gutter Type | | | | | | | |
| STONE CURB | | NO CURB AND GUTTER | | | | | | | |
| Culverts | Drop Inlets | Gates | | | | | | | |
| 0 | 1 | 1 | | | | | | | |
| Pavement Recommendation | | Condition Rating / PCR | | | | | | | |
| PREVENTIVE MAINTENANCE | | GOOD / 90 | | | | | | | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | | | | | | | |
| Poor | (0 - 60) | Fair | (61 - 84) | Good | (85 - 94) | Excellent | (95 - 100) | Not Rated | |
| See Appendix for definitions and formulas | | | | | | | | | |



Hawaii Volcanoes National Park

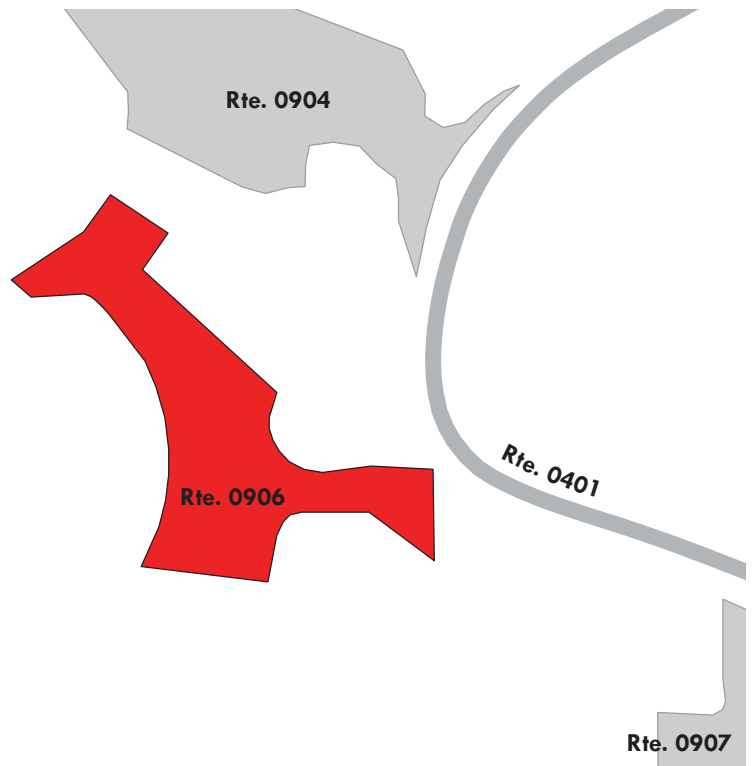
ROUTE 0906: VOLCANO HOUSE HOTEL SERVICE AREA BLDG #B167

Manual Rating

FROM ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.089 ON RIGHT

TO PARKING

| Inspection Date | FMSS Number | User Access | Surface Type | | | | | | |
|--|-------------------------|------------------------|---------------------|------|-----------|-----------|------------|-----------|--|
| 4/9/2014 | 42657 | NONPUBLIC | ASPHALT | | | | | | |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation | | | | | | |
| 8,391 | 0.14 | NOT APPLICABLE | N/A | | | | | | |
| Curb Type | | Curb & Gutter Type | | | | | | | |
| NO CURB | | NO CURB AND GUTTER | | | | | | | |
| Culverts | Drop Inlets | Gates | | | | | | | |
| 0 | 0 | 0 | | | | | | | |
| Pavement Recommendation | | Condition Rating / PCR | | | | | | | |
| HEAVY 3R TREATMENTS | | POOR / 53 | | | | | | | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | | | | | | | |
| Poor | (0 - 60) | Fair | (61 - 84) | Good | (85 - 94) | Excellent | (95 - 100) | Not Rated | |
| See Appendix for definitions and formulas | | | | | | | | | |



Hawaii Volcanoes National Park

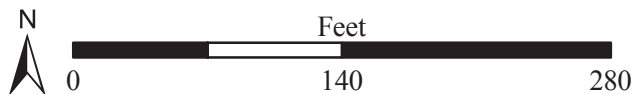
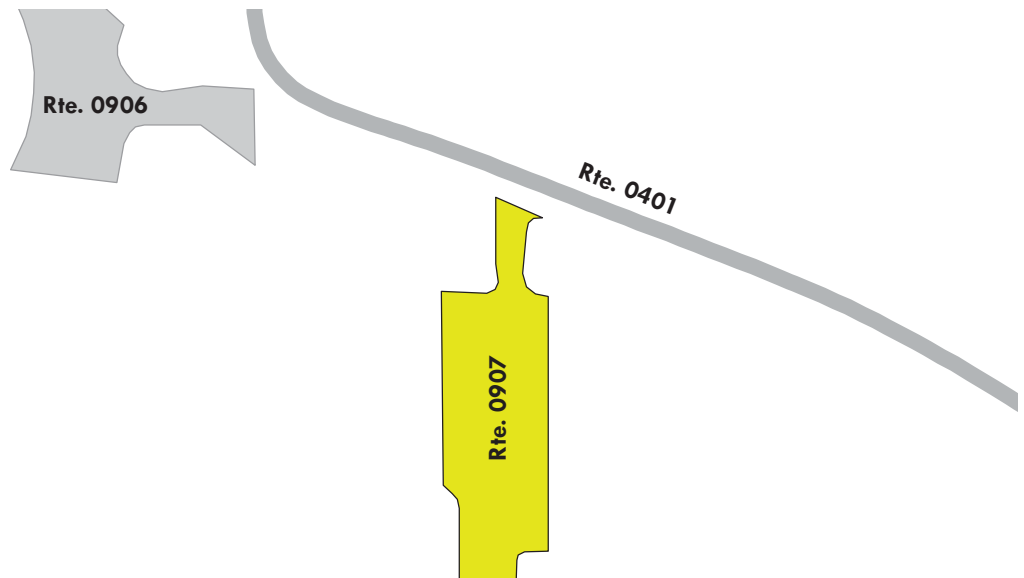
ROUTE 0907: BUILDING #2 PARKING

Manual Rating

FROM ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.112 ON RIGHT

TO PARKING

| Inspection Date | FMSS Number | User Access | Surface Type | | | | | | |
|--|-------------------------|------------------------|---------------------|------|-----------|-----------|------------|-----------|--|
| 4/9/2014 | 42658 | NONPUBLIC | ASPHALT | | | | | | |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation | | | | | | |
| 7,844 | 0.14 | NOT APPLICABLE | N/A | | | | | | |
| Curb Type | | Curb & Gutter Type | | | | | | | |
| NO CURB | | NO CURB AND GUTTER | | | | | | | |
| Culverts | Drop Inlets | Gates | | | | | | | |
| 0 | 0 | 0 | | | | | | | |
| Pavement Recommendation | | Condition Rating / PCR | | | | | | | |
| LIGHT 3R TREATMENTS | | FAIR / 73 | | | | | | | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | | | | | | | |
| Poor | (0 - 60) | Fair | (61 - 84) | Good | (85 - 94) | Excellent | (95 - 100) | Not Rated | |
| See Appendix for definitions and formulas | | | | | | | | | |



Hawaii Volcanoes National Park

ROUTE 0908D: VISITORS EMERGENCY OPERATIONS CENTER PARKING

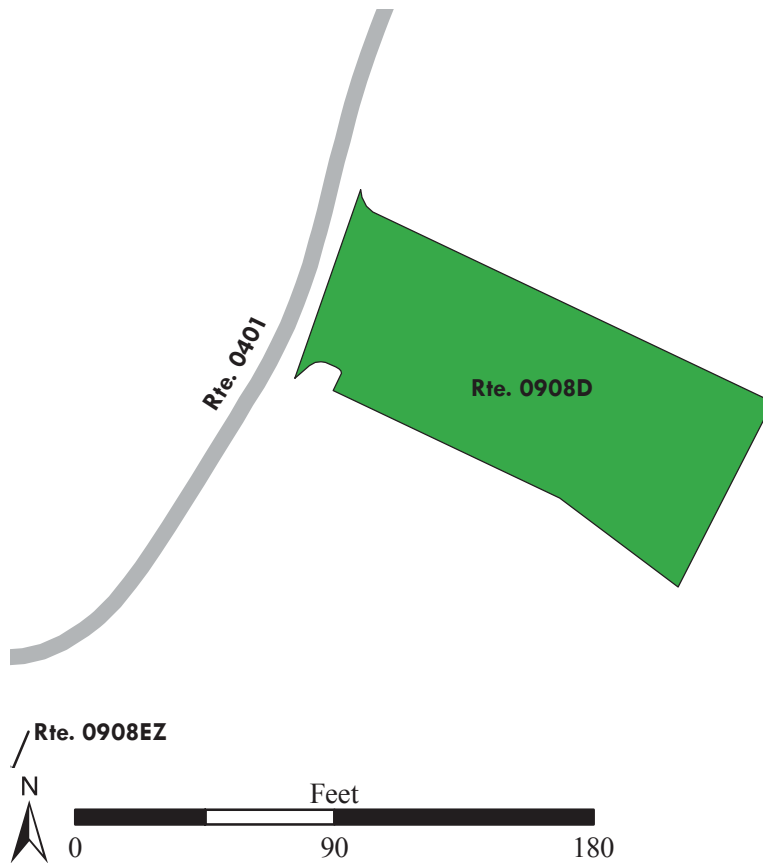
Manual Rating

FROM ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.386 ON RIGHT

TO PARKING

| Inspection Date | FMSS Number | User Access | Surface Type | | | | | | |
|--|-------------------------|------------------------|---------------------|------|-----------|-----------|------------|-----------|--|
| 4/9/2014 | NOT AVAILABLE | PUBLIC | ASPHALT | | | | | | |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation | | | | | | |
| 9,258 | 0.16 | NOT APPLICABLE | N/A | | | | | | |
| Curb Type | | Curb & Gutter Type | | | | | | | |
| NO CURB | | NO CURB AND GUTTER | | | | | | | |
| Culverts | Drop Inlets | Gates | | | | | | | |
| 0 | 0 | 0 | | | | | | | |
| Pavement Recommendation | | Condition Rating / PCR | | | | | | | |
| PREVENTIVE MAINTENANCE | | GOOD / 90 | | | | | | | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | | | | | | | |
| Poor | (0 - 60) | Fair | (61 - 84) | Good | (85 - 94) | Excellent | (95 - 100) | Not Rated | |
| See Appendix for definitions and formulas | | | | | | | | | |

Note: Route 0908D was included in the 0908ZZ parking area location during the 2012 Cycle 5 collection (was Route 0908DZ). Route 0908D was split from 0908ZZ in 2014 because it is a public parking lot (0908ZZ is nonpublic).



Hawaii Volcanoes National Park

ROUTE 0908ZZ: KILAUEA MAINTENANCE YARD PARKING AREAS

Summary Route

Manual Rating

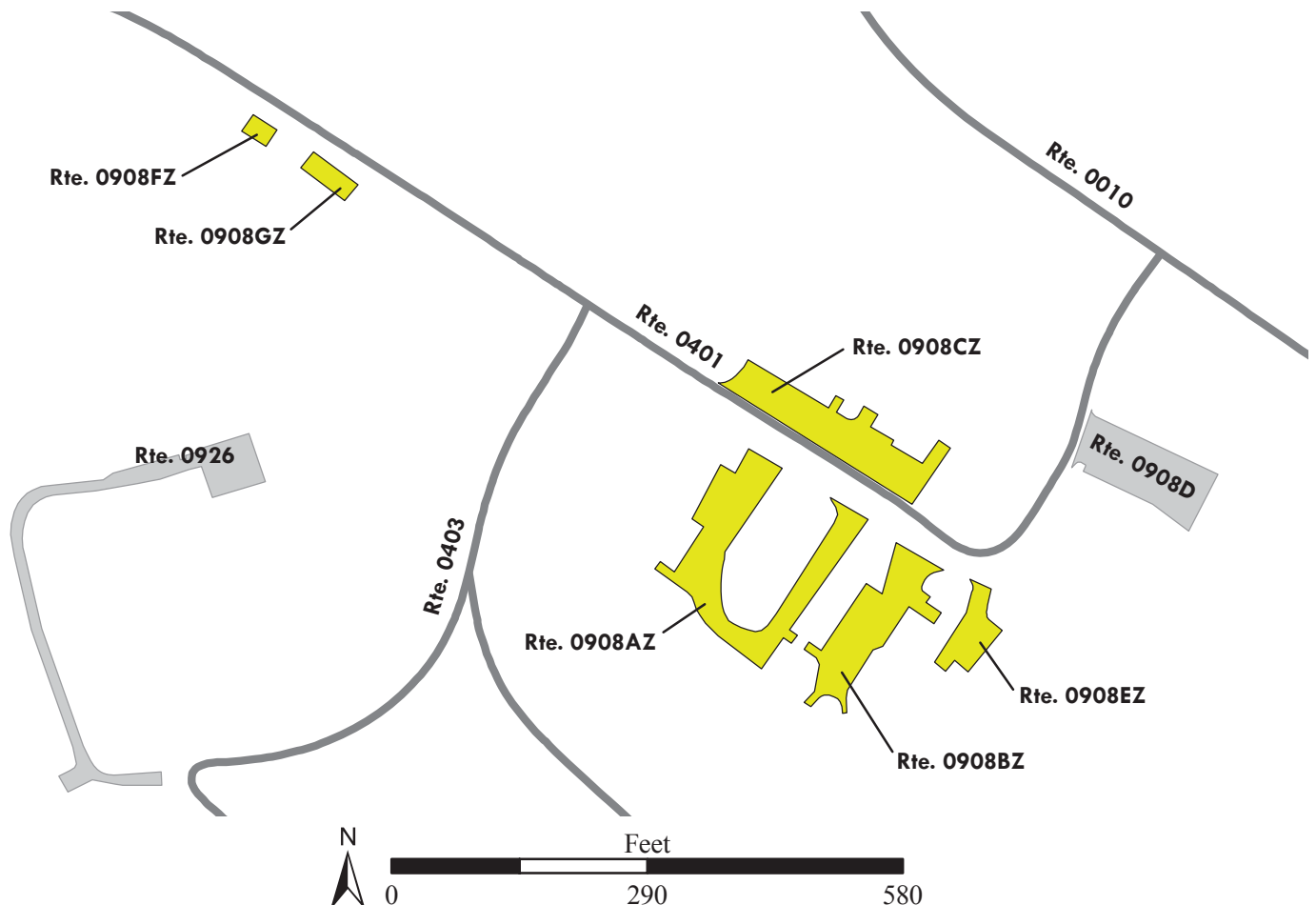
FROM ROUTE 0401 (NORTH RESIDENCE ROAD) ON LEFT AND RIGHT

TO PARKING

| Inspection Date | FMSS Number | User Access | Surface Type | | | | | | |
|--|-------------------------|------------------------|--------------|------|-----------|-----------|------------|-----------|--|
| 4/9/2014 | 22831 | NONPUBLIC | ASPHALT | | | | | | |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Condition Rating / PCR | | | | | | | |
| 41,352 | 0.71 | SUMMARY / 80 | | | | | | | |
| Culverts | Drop Inlets | Gates | | | | | | | |
| 2 | 3 | 0 | | | | | | | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | | | | | | | |
| Poor | (0 - 60) | Fair | (61 - 84) | Good | (85 - 94) | Excellent | (95 - 100) | Not Rated | |
| See Appendix for definitions and formulas | | | | | | | | | |

The condition shown on this page reflects the overall condition; it may not reflect individual subcomponent condition ratings.

Note: Subcomponent 0908DZ was included in 0908ZZ during the 2012 Cycle 5 collection. In 2014 Route 0908DZ was split from Route 0908ZZ and is now Route 0908D. Thus, summary totals for 0908ZZ will vary between 2012 and 2014.



Hawaii Volcanoes National Park

ROUTE 0908AZ: KILAUEA MAINTENANCE YARD PARKING A

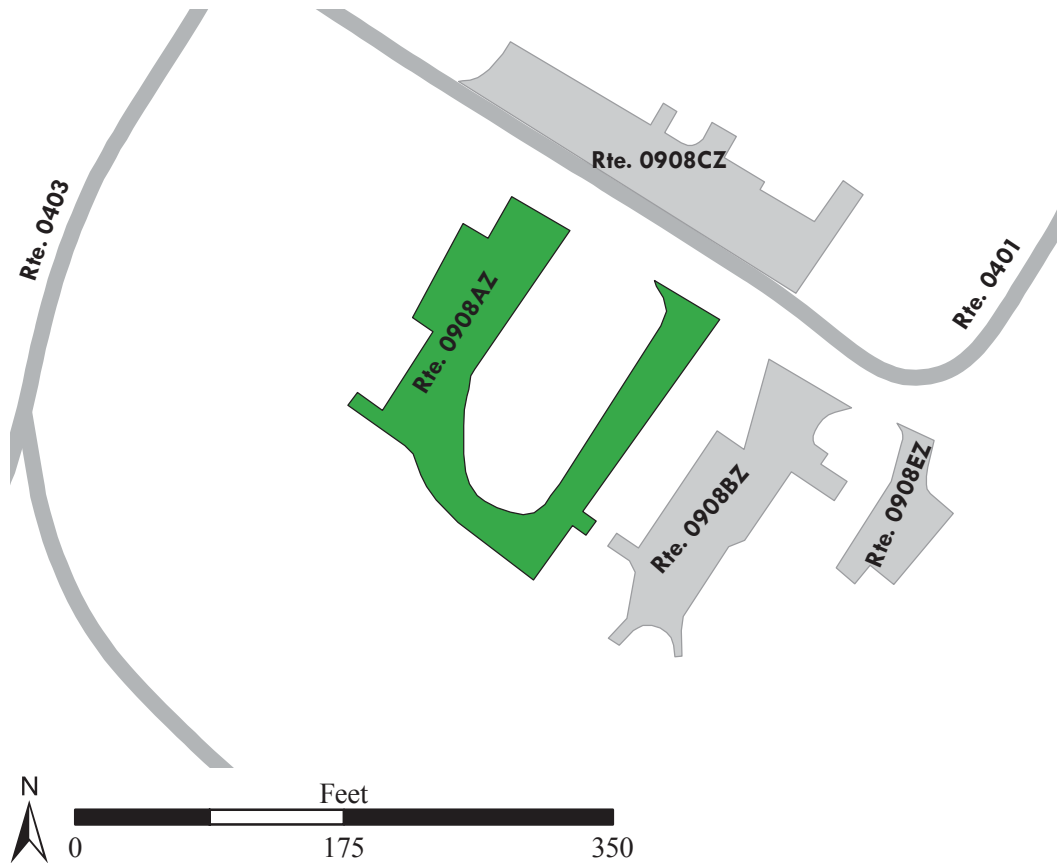
Subcomponent of Route HAVO-0908ZZ

Manual Rating

FROM ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.303 ON RIGHT

TO ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.324 ON RIGHT

| Inspection Date | FMSS Number | User Access | Surface Type |
|---|-------------------------|------------------------|---------------------|
| 4/9/2014 | 22831 | NONPUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 15,381 | 0.26 | NOT APPLICABLE | N/A |
| Curb Type | | Curb & Gutter Type | |
| NO CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 1 | 1 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| PREVENTIVE MAINTENANCE | | GOOD / 90 | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | |
| Poor | (0 - 60) | Fair | (61 - 84) |
| | | Good | (85 - 94) |
| | | Excellent | (95 - 100) |
| | | Not Rated | |
| See Appendix for definitions and formulas | | | |



Hawaii Volcanoes National Park

ROUTE 0908BZ: KILAUEA MAINTENANCE YARD PARKING B

Subcomponent of Route HAVO-0908ZZ

Manual Rating

FROM ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.341 ON RIGHT

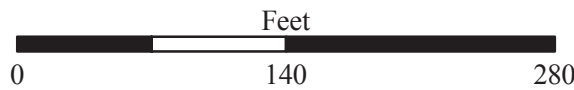
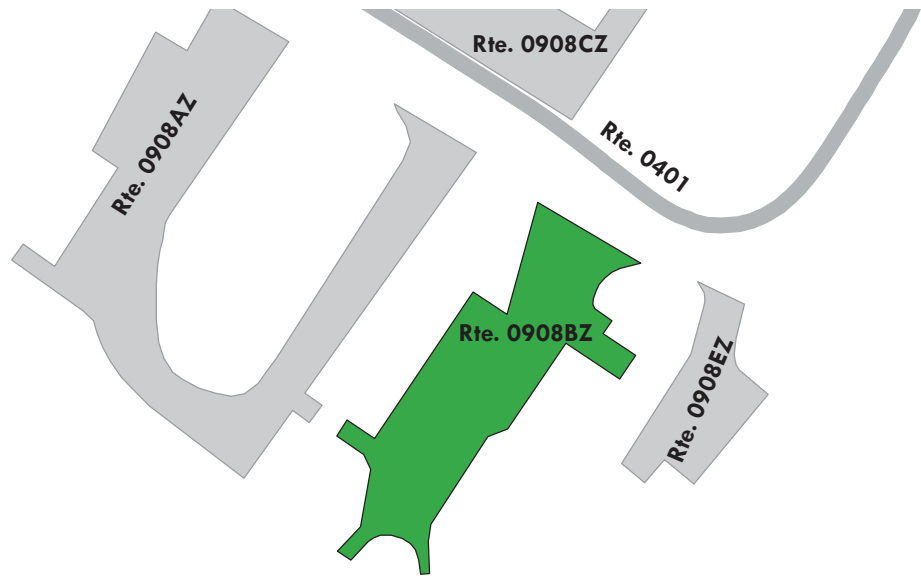
TO PARKING

| Inspection Date | FMSS Number | User Access | Surface Type |
|-------------------------|-------------------------|------------------------|---------------------|
| 4/9/2014 | 22831 | NONPUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 9,439 | 0.16 | NOT APPLICABLE | N/A |
| Curb Type | | Curb & Gutter Type | |
| NO CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 1 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| PREVENTIVE MAINTENANCE | | GOOD / 90 | |

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)
 Fair (61 - 84)
 Good (85 - 94)
 Excellent (95 - 100)
 Not Rated

See Appendix for definitions and formulas



Hawaii Volcanoes National Park

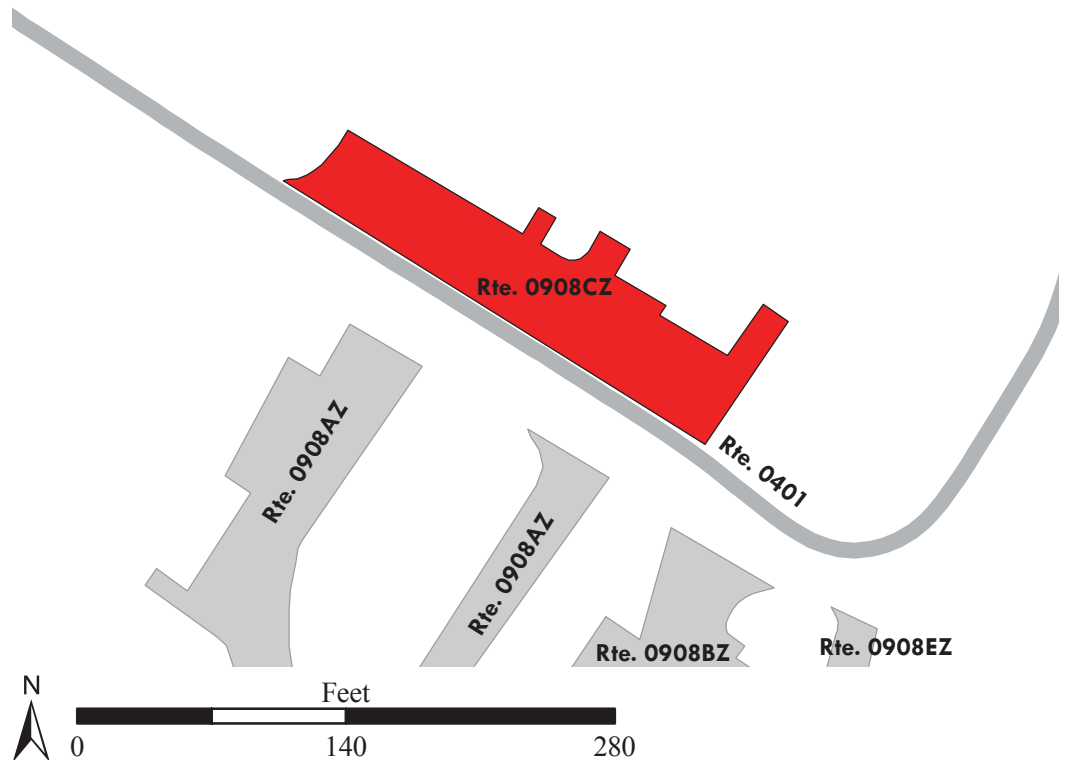
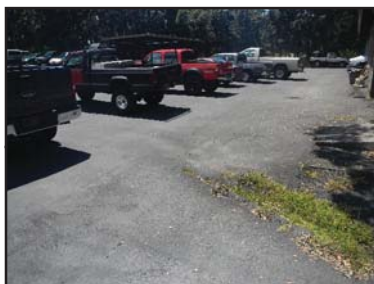
ROUTE 0908CZ: KILAUEA MAINTENANCE YARD PARKING C

Subcomponent of Route HAVO-0908ZZ

Manual Rating

ADJACENT TO ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.311 ON LEFT

| Inspection Date | FMSS Number | User Access | Surface Type |
|---|-------------------------|------------------------|---------------------|
| 4/9/2014 | 22831 | NONPUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 11,244 | 0.19 | NOT APPLICABLE | N/A |
| Curb Type | | Curb & Gutter Type | |
| NO CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| HEAVY 3R TREATMENTS | | POOR / 53 | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | |
| Poor | (0 - 60) | Fair | (61 - 84) |
| | | Good | (85 - 94) |
| | | Excellent | (95 - 100) |
| | | Not Rated | |
| See Appendix for definitions and formulas | | | |



Hawaii Volcanoes National Park

ROUTE 0908EZ: KILAUEA MAINTENANCE YARD PARKING E

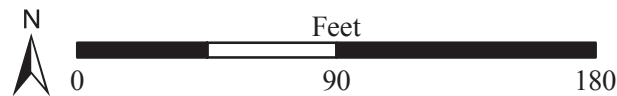
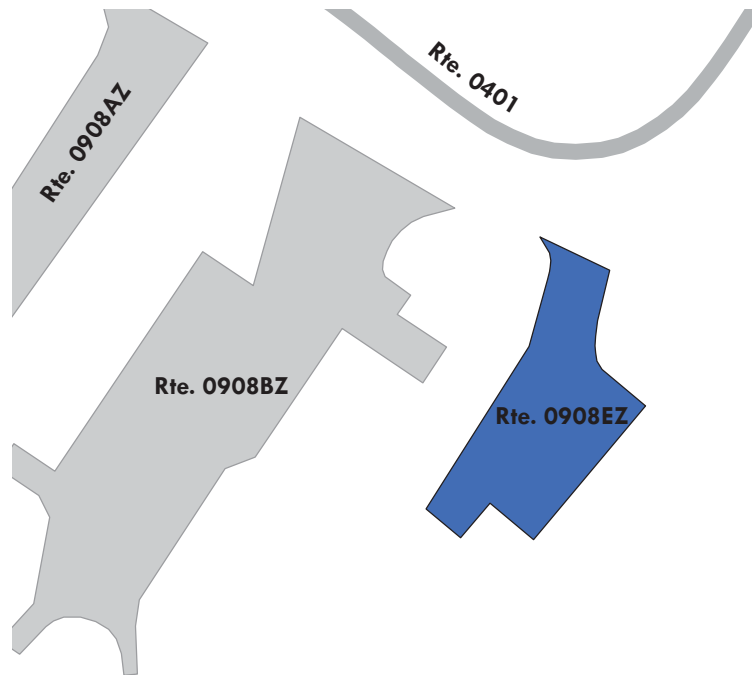
Subcomponent of Route HAVO-0908ZZ

Manual Rating

FROM ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.354 ON RIGHT

TO PARKING

| Inspection Date | FMSS Number | User Access | Surface Type |
|---|--|------------------------|---|
| 4/9/2014 | 22831 | NONPUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 3,225 | 0.06 | NOT APPLICABLE | N/A |
| Curb Type | | Curb & Gutter Type | |
| NO CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 2 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| DO NOTHING | | EXCELLENT / 97 | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | |
| Poor | (0 - 60) | Fair | (61 - 84) |
| | | Good | (85 - 94) |
| | | Excellent | (95 - 100) |
| | | Not Rated | |
| See Appendix for definitions and formulas | | | |



Hawaii Volcanoes National Park

ROUTE 0908FZ: RESIDENCE ROAD PARKING A

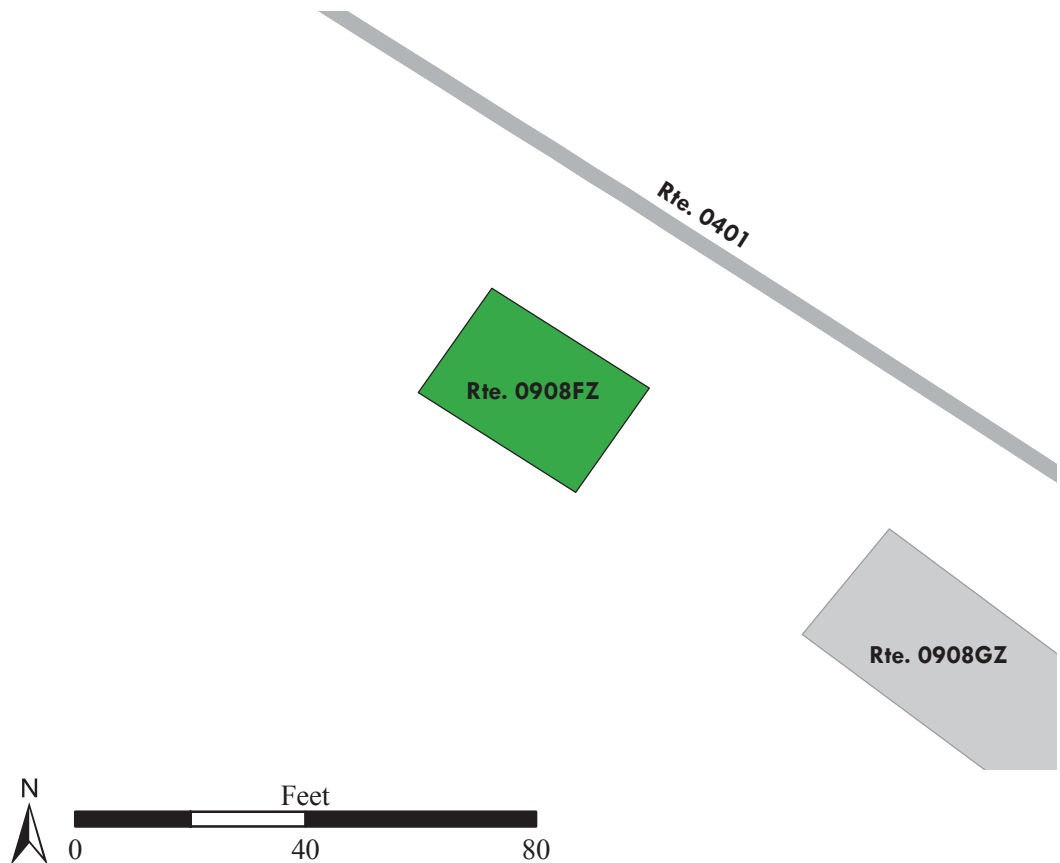
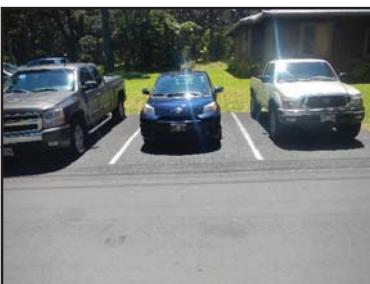
Subcomponent of Route HAVO-0908ZZ

Manual Rating

ADJACENT TO ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP ON 0.180 ON LEFT

| Inspection Date | FMSS Number | User Access | Surface Type | | | | | | |
|--|-------------------------|------------------------|---------------------|------|-----------|-----------|------------|-----------|--|
| 4/9/2014 | 22831 | NONPUBLIC | ASPHALT | | | | | | |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation | | | | | | |
| 673 | 0.01 | NOT APPLICABLE | N/A | | | | | | |
| Curb Type | | Curb & Gutter Type | | | | | | | |
| NO CURB | | NO CURB AND GUTTER | | | | | | | |
| Culverts | Drop Inlets | Gates | | | | | | | |
| 0 | 0 | 0 | | | | | | | |
| Pavement Recommendation | | Condition Rating / PCR | | | | | | | |
| PREVENTIVE MAINTENANCE | | GOOD / 90 | | | | | | | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | | | | | | | |
| Poor | (0 - 60) | Fair | (61 - 84) | Good | (85 - 94) | Excellent | (95 - 100) | Not Rated | |
| See Appendix for definitions and formulas | | | | | | | | | |

Note: Route was added to the inventory during the 2012 Cycle 5 collection trip and collected as Route 0942. Route number was updated when park staff requested that it be combined into the 0908ZZ parking area location.



Hawaii Volcanoes National Park

ROUTE 0908GZ: RESIDENCE ROAD PARKING B

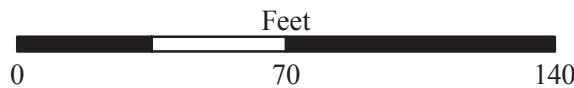
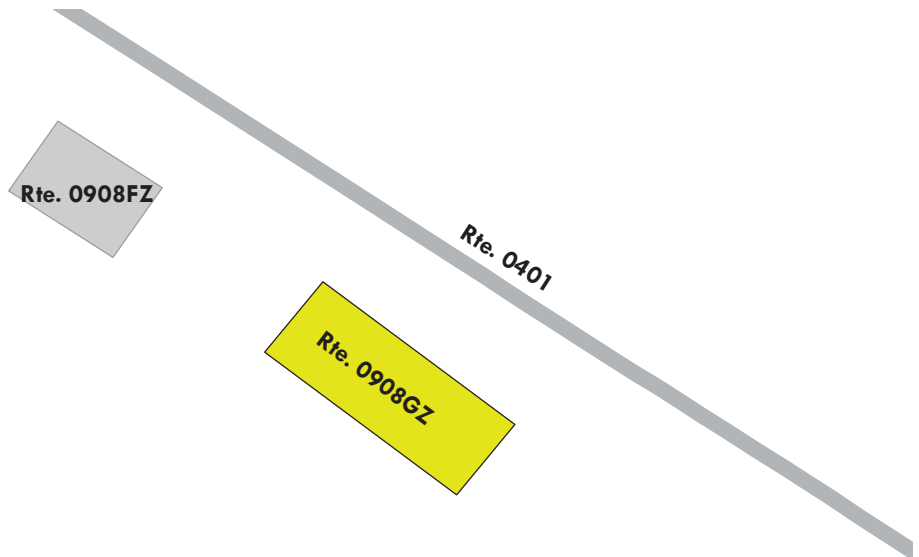
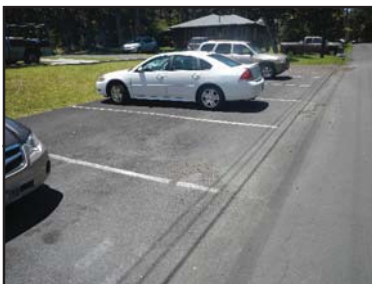
Subcomponent of Route HAVO-0908ZZ

Manual Rating

ADJACENT TO ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.196 ON LEFT

| Inspection Date | FMSS Number | User Access | Surface Type | | | | | | |
|--|-------------------------|------------------------|---------------------|------|-----------|-----------|------------|-----------|--|
| 4/9/2014 | 22831 | NONPUBLIC | ASPHALT | | | | | | |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation | | | | | | |
| 1,390 | 0.02 | NOT APPLICABLE | N/A | | | | | | |
| Curb Type | | Curb & Gutter Type | | | | | | | |
| NO CURB | | NO CURB AND GUTTER | | | | | | | |
| Culverts | Drop Inlets | Gates | | | | | | | |
| 0 | 0 | 0 | | | | | | | |
| Pavement Recommendation | | Condition Rating / PCR | | | | | | | |
| LIGHT 3R TREATMENTS | | FAIR / 73 | | | | | | | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | | | | | | | |
| Poor | (0 - 60) | Fair | (61 - 84) | Good | (85 - 94) | Excellent | (95 - 100) | Not Rated | |
| See Appendix for definitions and formulas | | | | | | | | | |

Note: Route was added to the inventory during the 2012 Cycle 5 collection trip and collected as Route 0943. Route number was updated when park staff requested that it be combined into the 0908ZZ parking area location.



Hawaii Volcanoes National Park

ROUTE 0909ZZ: STEAM VENTS PARKING AREAS

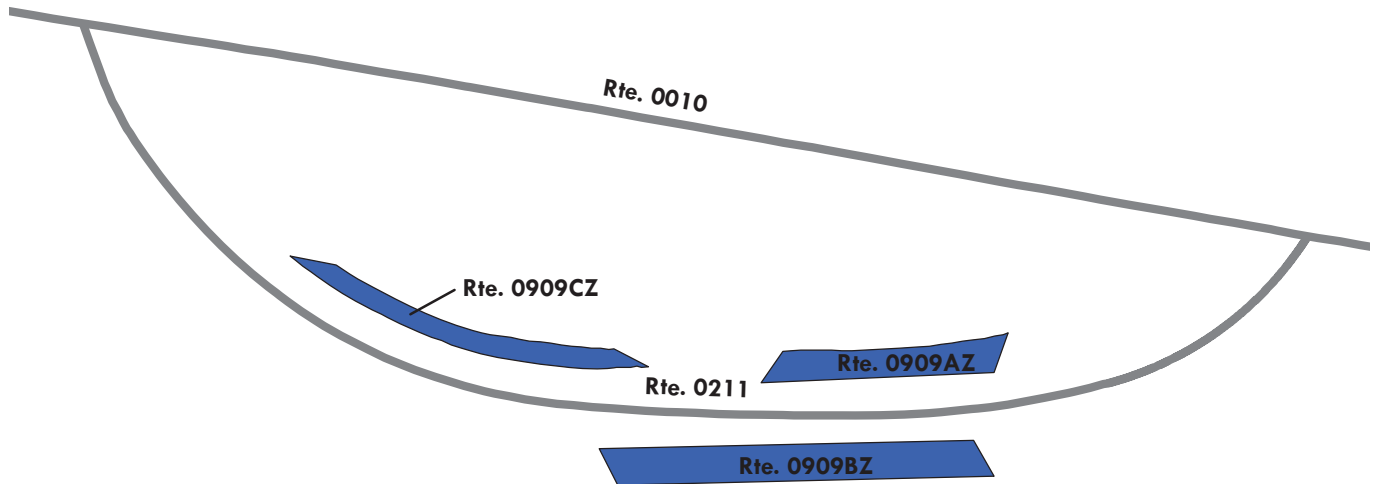
Summary Route

Manual Rating

ADJACENT TO ROUTE 0211 (STEAM VENTS ROAD)

| Inspection Date | FMSS Number | User Access | Surface Type |
|--|-------------------------|------------------------|--------------|
| 4/9/2014 | 22292 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Condition Rating / PCR | |
| 6,051 | 0.10 | SUMMARY / 97 | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | |
| Poor | (0 - 60) | Fair | (61 - 84) |
| | | Good | (85 - 94) |
| | | Excellent | (95 - 100) |
| | | Not Rated | |
| See Appendix for definitions and formulas | | | |

The condition shown on this page reflects the overall condition; it may not reflect individual subcomponent condition ratings.



Hawaii Volcanoes National Park

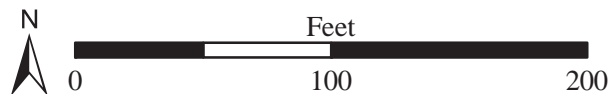
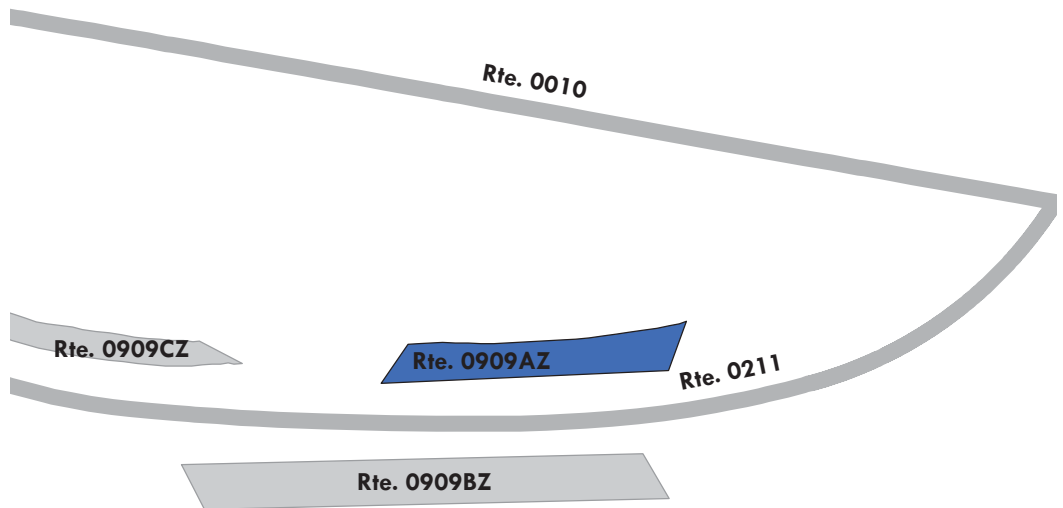
ROUTE 0909AZ: STEAM VENTS PARKING A

Subcomponent of Route HAVO-0909ZZ

Manual Rating

ADJACENT TO ROUTE 0211 (STEAM VENTS ROAD) AT MP 0.07 ON LEFT

| Inspection Date | FMSS Number | User Access | Surface Type |
|---|--|------------------------|---|
| 4/9/2014 | 22292 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 1,514 | 0.03 | NOT APPLICABLE | N/A |
| Curb Type | | Curb & Gutter Type | |
| NO CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| DO NOTHING | | EXCELLENT / 97 | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | |
| Poor | (0 - 60) | Fair | (61 - 84) |
| | | Good | (85 - 94) |
| | | Excellent | (95 - 100) |
| | | Not Rated | |
| See Appendix for definitions and formulas | | | |



Hawaii Volcanoes National Park

ROUTE 0909BZ: STEAM VENTS PARKING B

Subcomponent of Route HAVO-0909ZZ

Manual Rating

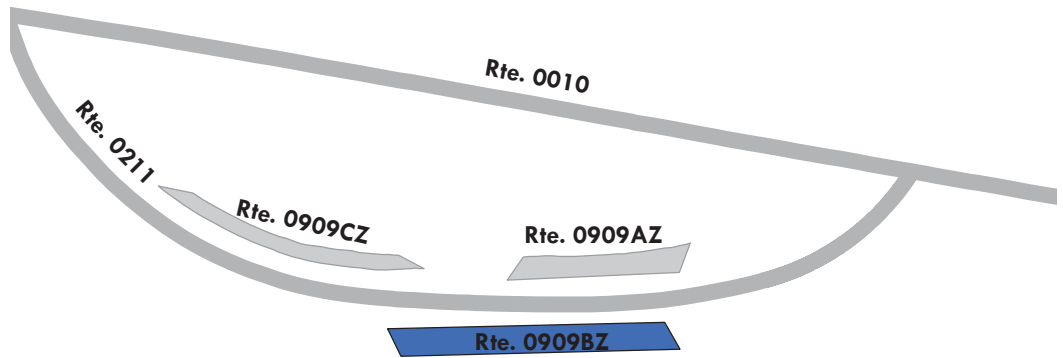
ADJACENT TO ROUTE 0211 (STEAM VENTS ROAD) AT MP 0.08 ON RIGHT

| Inspection Date | FMSS Number | User Access | Surface Type |
|-------------------------|-------------------------|------------------------|---------------------|
| 4/9/2014 | 22292 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 3,016 | 0.05 | 4 | DO NOTHING |
| Curb Type | | Curb & Gutter Type | |
| STONE CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| DO NOTHING | | EXCELLENT / 97 | |

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60) Fair (61 - 84) Good (85 - 94) Excellent (95 - 100) Not Rated

See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0909CZ: STEAM VENTS PARKING C

Subcomponent of Route HAVO-0909ZZ

Manual Rating

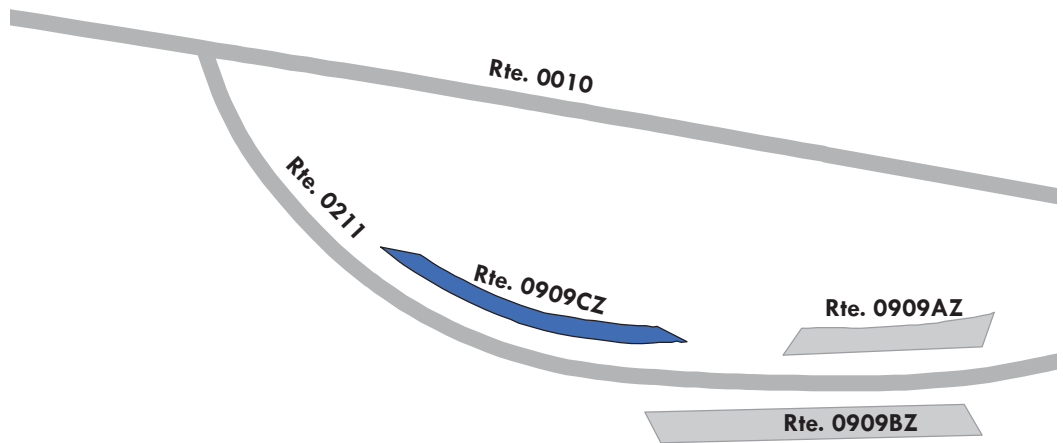
ADJACENT TO ROUTE 0211 (STEAM VENTS ROAD) AT MP 0.04 ON LEFT

| Inspection Date | FMSS Number | User Access | Surface Type |
|-------------------------|-------------------------|------------------------|---------------------|
| 4/9/2014 | 22292 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 1,521 | 0.03 | NOT APPLICABLE | N/A |
| Curb Type | | Curb & Gutter Type | |
| NO CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| DO NOTHING | | EXCELLENT / 97 | |

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60) Fair (61 - 84) Good (85 - 94) Excellent (95 - 100) Not Rated

See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0910ZZ: KILAUEA OVERLOOK AND PICNIC AREA PARKING AREAS

Summary Route

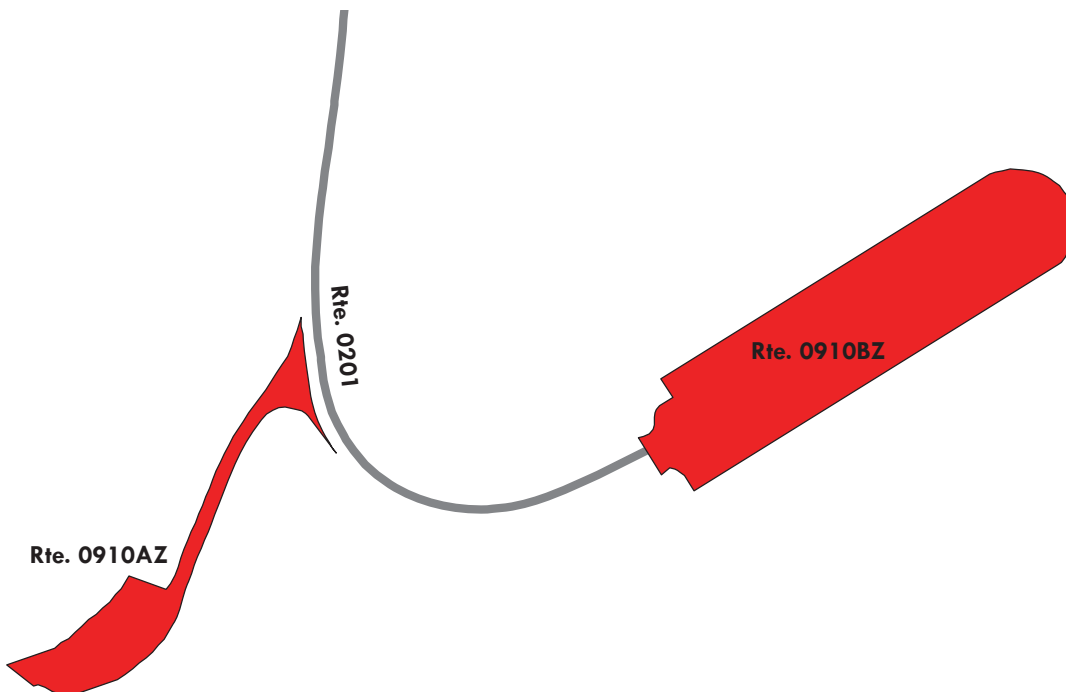
Manual Rating

FROM ROUTE 0201 (KILAUEA OVERLOOK ROAD)

TO PARKING

| Inspection Date | FMSS Number | User Access | Surface Type | | | | | | |
|--|-------------------------|------------------------|--------------|------|-----------|-----------|------------|-----------|--|
| 4/9/2014 | 22245 | PUBLIC | ASPHALT | | | | | | |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Condition Rating / PCR | | | | | | | |
| 24,620 | 0.42 | SUMMARY / 53 | | | | | | | |
| Culverts | Drop Inlets | Gates | | | | | | | |
| 0 | 0 | 0 | | | | | | | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | | | | | | | |
| Poor | (0 - 60) | Fair | (61 - 84) | Good | (85 - 94) | Excellent | (95 - 100) | Not Rated | |
| See Appendix for definitions and formulas | | | | | | | | | |

The condition shown on this page reflects the overall condition; it may not reflect individual subcomponent condition ratings.



Hawaii Volcanoes National Park

ROUTE 0910AZ: KILAUEA PICNIC AREA PARKING

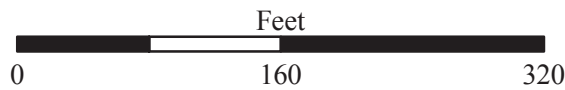
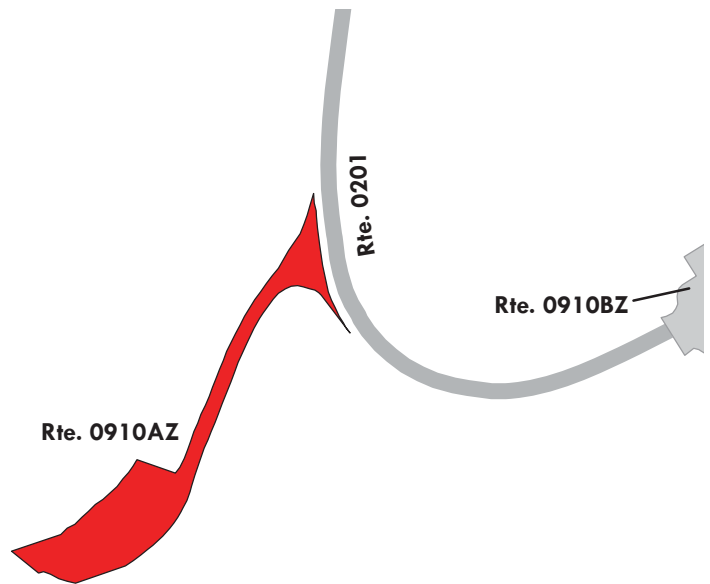
Subcomponent of Route HAVO-0910ZZ

Manual Rating

FROM ROUTE 0201 (KILAUEA OVERLOOK ROAD) AT MP 0.15 ON RIGHT

TO PARKING

| Inspection Date | FMSS Number | User Access | Surface Type |
|---|-------------------------|------------------------|---------------------|
| 4/9/2014 | 22245 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 5,550 | 0.10 | NOT APPLICABLE | N/A |
| Curb Type | | Curb & Gutter Type | |
| NO CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| HEAVY 3R TREATMENTS | | POOR / 53 | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | |
| Poor | (0 - 60) | Fair | (61 - 84) |
| Good | (85 - 94) | Excellent | (95 - 100) |
| | | Not Rated | [Black Box] |
| See Appendix for definitions and formulas | | | |



Hawaii Volcanoes National Park

ROUTE 0910BZ: KILAUEA OVERLOOK PARKING

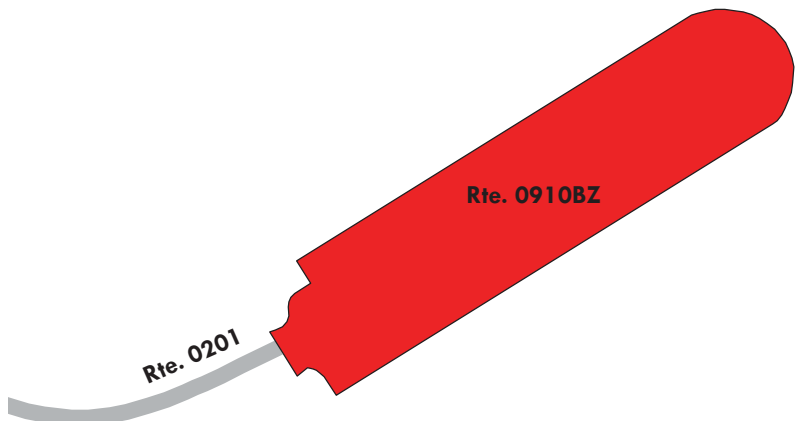
Subcomponent of Route HAVO-0910ZZ

Manual Rating

FROM END OF ROUTE 0201 (KILAUEA OVERLOOK ROAD)

TO PARKING

| Inspection Date | FMSS Number | User Access | Surface Type |
|---|-------------------------|------------------------|---------------------|
| 4/9/2014 | 22245 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 19,070 | 0.33 | 4 | LIGHT REPAIR |
| Curb Type | | Curb & Gutter Type | |
| STONE CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| HEAVY 3R TREATMENTS | | POOR / 53 | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | |
| Poor | (0 - 60) | Fair | (61 - 84) |
| | | Good | (85 - 94) |
| | | Excellent | (95 - 100) |
| | | Not Rated | |
| See Appendix for definitions and formulas | | | |



Hawaii Volcanoes National Park

ROUTE 0911: VOLCANO OBSERVATORY PARKING

Manual Rating

FROM ROUTE 0010 (CRATER RIM DRIVE) AT MP 2.78 ON LEFT

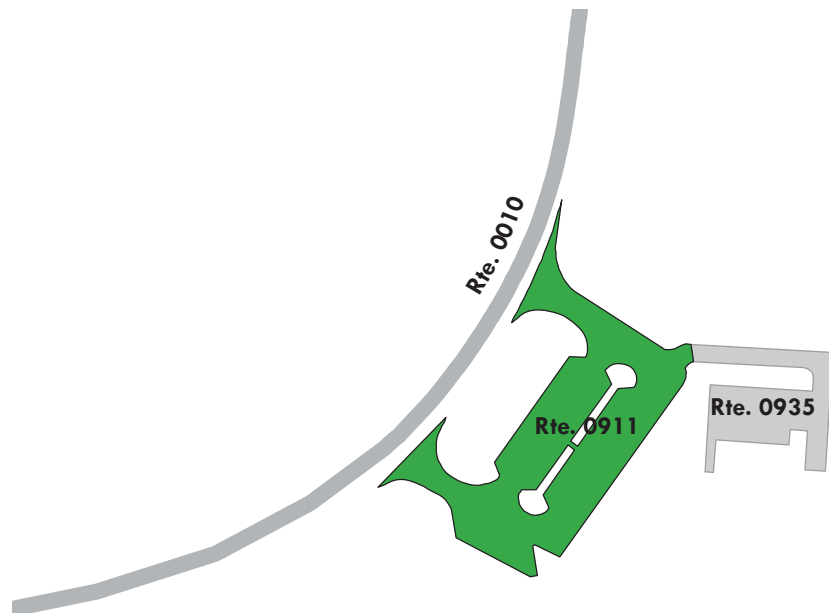
TO ROUTE 0010 (CRATER RIM DRIVE) AT MP 2.83 ON LEFT

| Inspection Date | FMSS Number | User Access | Surface Type |
|-------------------------|-------------------------|------------------------|---------------------|
| 4/9/2014 | 22266 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 47,247 | 0.81 | 5 | DO NOTHING |
| Curb Type | | Curb & Gutter Type | |
| STONE CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 1 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| PREVENTIVE MAINTENANCE | | GOOD / 90 | |

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)
 Fair (61 - 84)
 Good (85 - 94)
 Excellent (95 - 100)
 Not Rated

See Appendix for definitions and formulas



Hawaii Volcanoes National Park
ROUTE 0912: HALEMAUMAU OVERLOOK PARKING

FROM ROUTE 0010 (CRATER RIM DRIVE)

TO ROUTE 0010 (CRATER RIM DRIVE)

Route 0912 could not be collected for GPS, condition, and features in Cycle 5 because the parking area was inaccessible due to hazardous volcanic gas conditions.

Hawaii Volcanoes National Park

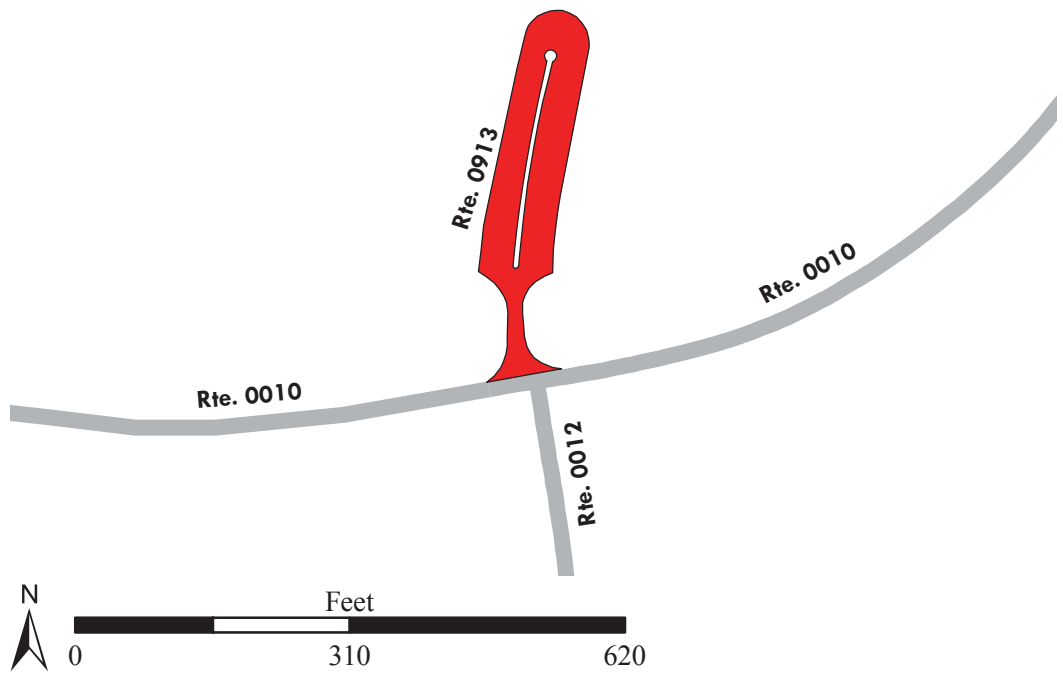
ROUTE 0913: DEVASTATION TRAIL PARKING

Manual Rating

FROM ROUTE 0010 (CRATER RIM DRIVE) AT MP 7.56 ON LEFT

TO PARKING

| Inspection Date | FMSS Number | User Access | Surface Type | | | | | | |
|--|-------------------------|------------------------|---------------------|------|-----------|-----------|------------|-----------|--|
| 4/12/2014 | 42663 | PUBLIC | ASPHALT | | | | | | |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation | | | | | | |
| 23,305 | 0.40 | 5 | MODERATE REPAIR | | | | | | |
| Curb Type | | Curb & Gutter Type | | | | | | | |
| STONE CURB | | NO CURB AND GUTTER | | | | | | | |
| Culverts | Drop Inlets | Gates | | | | | | | |
| 0 | 0 | 0 | | | | | | | |
| Pavement Recommendation | | Condition Rating / PCR | | | | | | | |
| HEAVY 3R TREATMENTS | | POOR / 53 | | | | | | | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | | | | | | | |
| Poor | (0 - 60) | Fair | (61 - 84) | Good | (85 - 94) | Excellent | (95 - 100) | Not Rated | |
| See Appendix for definitions and formulas | | | | | | | | | |



Hawaii Volcanoes National Park

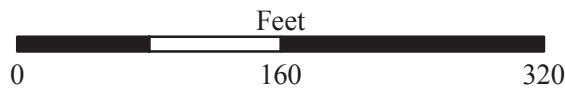
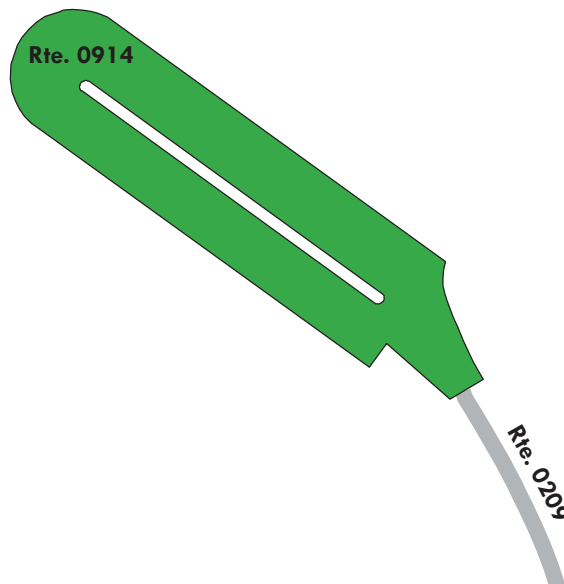
ROUTE 0914: PUU PUI PUBLISHING

Manual Rating

FROM END OF ROUTE 0209 (PUU PUI OVERLOOK ROAD)

TO PARKING

| Inspection Date | FMSS Number | User Access | Surface Type | | | | | | |
|--|-------------------------|------------------------|---------------------|------|-----------|-----------|------------|-----------|--|
| 4/12/2014 | 22302 | PUBLIC | ASPHALT | | | | | | |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation | | | | | | |
| 21,336 | 0.37 | 5 | MODERATE REPAIR | | | | | | |
| Curb Type | | Curb & Gutter Type | | | | | | | |
| STONE CURB | | NO CURB AND GUTTER | | | | | | | |
| Culverts | Drop Inlets | Gates | | | | | | | |
| 0 | 0 | 0 | | | | | | | |
| Pavement Recommendation | | Condition Rating / PCR | | | | | | | |
| PREVENTIVE MAINTENANCE | | GOOD / 90 | | | | | | | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | | | | | | | |
| Poor | (0 - 60) | Fair | (61 - 84) | Good | (85 - 94) | Excellent | (95 - 100) | Not Rated | |
| See Appendix for definitions and formulas | | | | | | | | | |



Hawaii Volcanoes National Park

ROUTE 0915ZZ: THURSTON LAVA TUBE PARKING AREAS

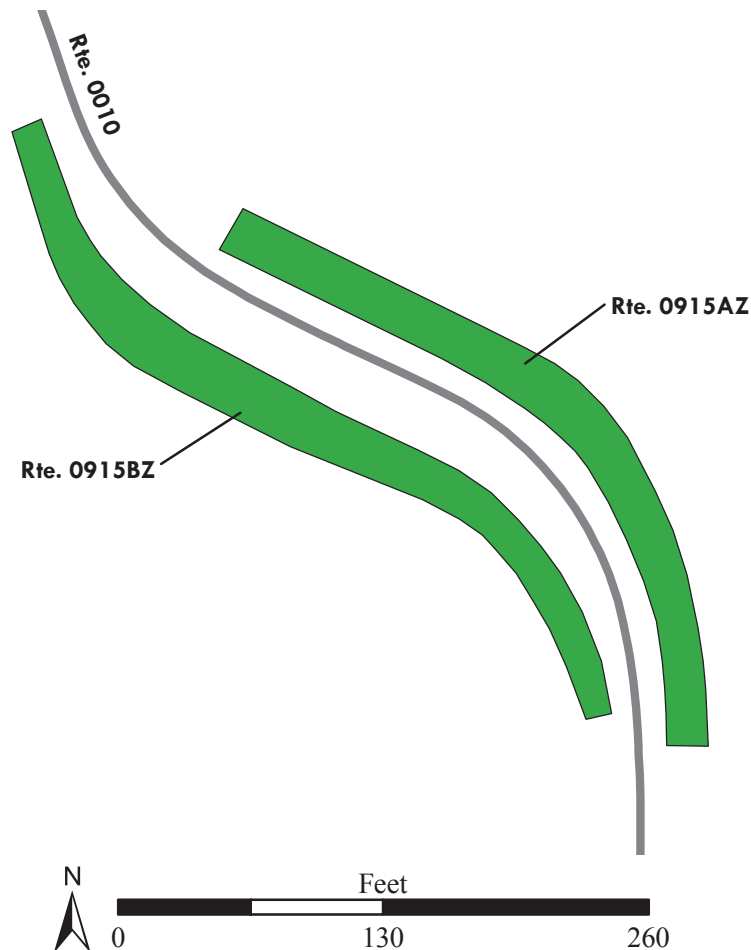
Summary Route

Manual Rating

ADJACENT TO ROUTE 0010 (CRATER RIM DRIVE)

| Inspection Date | FMSS Number | User Access | Surface Type |
|--|-------------------------|------------------------|--------------|
| 4/12/2014 | 42665 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Condition Rating / PCR | |
| 16,579 | 0.28 | SUMMARY / 90 | |
| Culverts | Drop Inlets | Gates | |
| 0 | 1 | 0 | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | |
| Poor | (0 - 60) | Fair | (61 - 84) |
| | | Good | (85 - 94) |
| | | Excellent | (95 - 100) |
| | | Not Rated | |
| See Appendix for definitions and formulas | | | |

The condition shown on this page reflects the overall condition; it may not reflect individual subcomponent condition ratings.



Hawaii Volcanoes National Park

ROUTE 0915AZ: THURSTON LAVA TUBE BUS PARKING AREA A

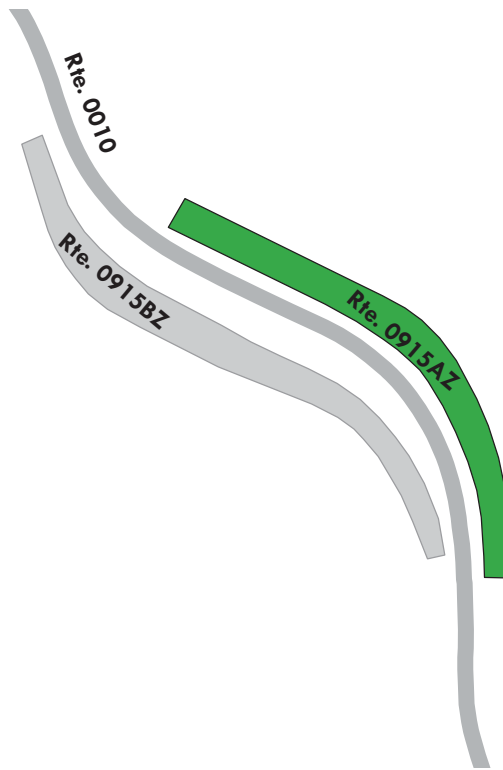
Subcomponent of Route HAVO-0915ZZ

Manual Rating

ADJACENT TO ROUTE 0010 (CRATER RIM DRIVE) AT MP 9.00 ON RIGHT

| Inspection Date | FMSS Number | User Access | Surface Type |
|-------------------------|-------------------------|------------------------|---------------------|
| 4/12/2014 | 42665 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 7,882 | 0.14 | 5 | LIGHT REPAIR |
| Curb Type | | Curb & Gutter Type | |
| STONE CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| PREVENTIVE MAINTENANCE | | GOOD / 90 | |

| Route Condition Legend – Pavement Condition Rating (PCR) | | | | | |
|--|--|-----------|---|-----------|---|
| Poor | (0 - 60) | Fair | (61 - 84) | Good | (85 - 94) |
| | | Excellent | (95 - 100) | Not Rated | |
| See Appendix for definitions and formulas | | | | | |



Hawaii Volcanoes National Park

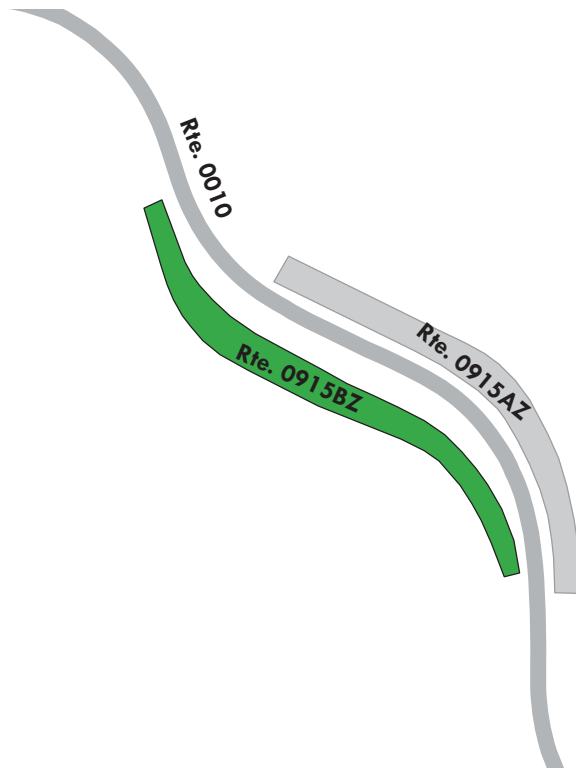
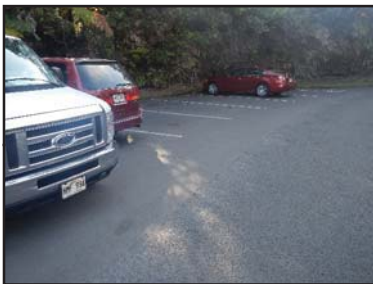
ROUTE 0915BZ: THURSTON LAVA TUBE PARKING AREA B

Subcomponent of Route HAVO-0915ZZ

Manual Rating

ADJACENT TO ROUTE 0010 (CRATER RIM DRIVE) AT MP 9.01 ON LEFT

| Inspection Date | FMSS Number | User Access | Surface Type |
|---|-------------------------|------------------------|---------------------|
| 4/12/2014 | 42665 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 8,697 | 0.15 | 4 | LIGHT REPAIR |
| Curb Type | | Curb & Gutter Type | |
| STONE CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 1 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| PREVENTIVE MAINTENANCE | | GOOD / 90 | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | |
| Poor | (0 - 60) | Fair | (61 - 84) |
| | | Good | (85 - 94) |
| | | Excellent | (95 - 100) |
| | | Not Rated | |
| See Appendix for definitions and formulas | | | |



Hawaii Volcanoes National Park

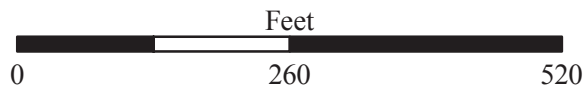
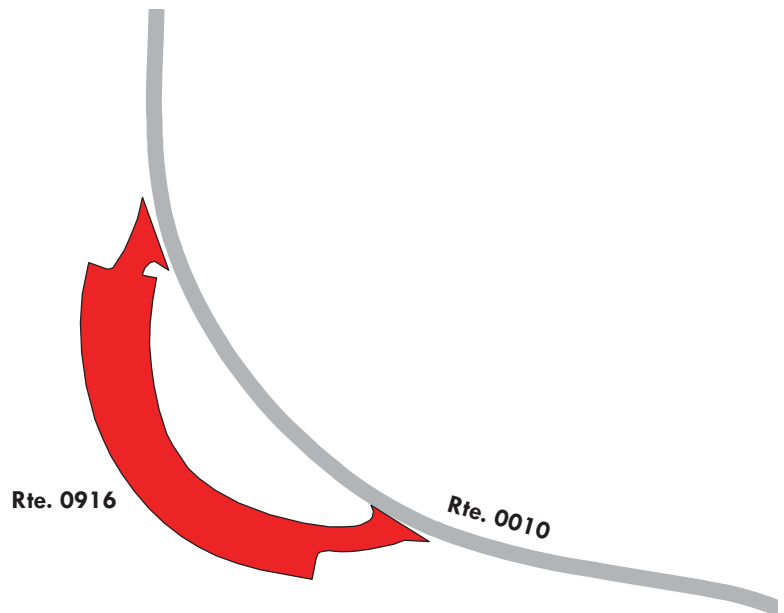
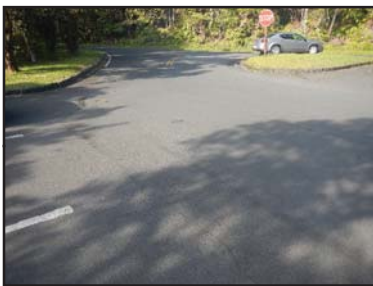
ROUTE 0916: KILAUEA IKI PARKING

Manual Rating

FROM ROUTE 0010 (CRATER RIM DRIVE) AT MP 9.31 ON LEFT

TO ROUTE 0010 (CRATER RIM DRIVE) AT MP 9.38 ON LEFT

| Inspection Date | FMSS Number | User Access | Surface Type | | | | | | |
|--|-------------------------|------------------------|---------------------|------|-----------|-----------|------------|-----------|--|
| 4/12/2014 | 42666 | PUBLIC | ASPHALT | | | | | | |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation | | | | | | |
| 24,402 | 0.42 | 5 | LIGHT REPAIR | | | | | | |
| Curb Type | | Curb & Gutter Type | | | | | | | |
| STONE CURB | | NO CURB AND GUTTER | | | | | | | |
| Culverts | Drop Inlets | Gates | | | | | | | |
| 0 | 1 | 0 | | | | | | | |
| Pavement Recommendation | | Condition Rating / PCR | | | | | | | |
| HEAVY 3R TREATMENTS | | POOR / 53 | | | | | | | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | | | | | | | |
| Poor | (0 - 60) | Fair | (61 - 84) | Good | (85 - 94) | Excellent | (95 - 100) | Not Rated | |
| See Appendix for definitions and formulas | | | | | | | | | |



Hawaii Volcanoes National Park

ROUTE 0917: RESOURCE MANAGEMENT AREA PARKING

Manual Rating

FROM END OF ROUTE 0409 (RESOURCE MANAGEMENT ROAD)

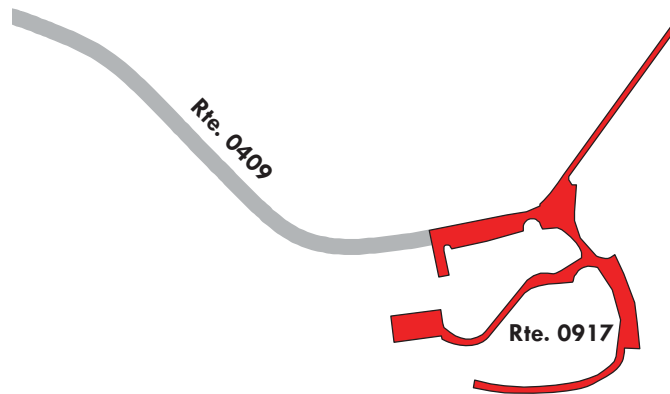
TO PARKING

| Inspection Date | FMSS Number | User Access | Surface Type |
|-------------------------|-------------------------|------------------------|---------------------|
| 4/9/2014 | 42667 | NONPUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 43,025 | 0.74 | NOT APPLICABLE | N/A |
| Curb Type | | Curb & Gutter Type | |
| NO CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 1 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| HEAVY 3R TREATMENTS | | POOR / 53 | |

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)
 Fair (61 - 84)
 Good (85 - 94)
 Excellent (95 - 100)
 Not Rated

See Appendix for definitions and formulas



Hawaii Volcanoes National Park

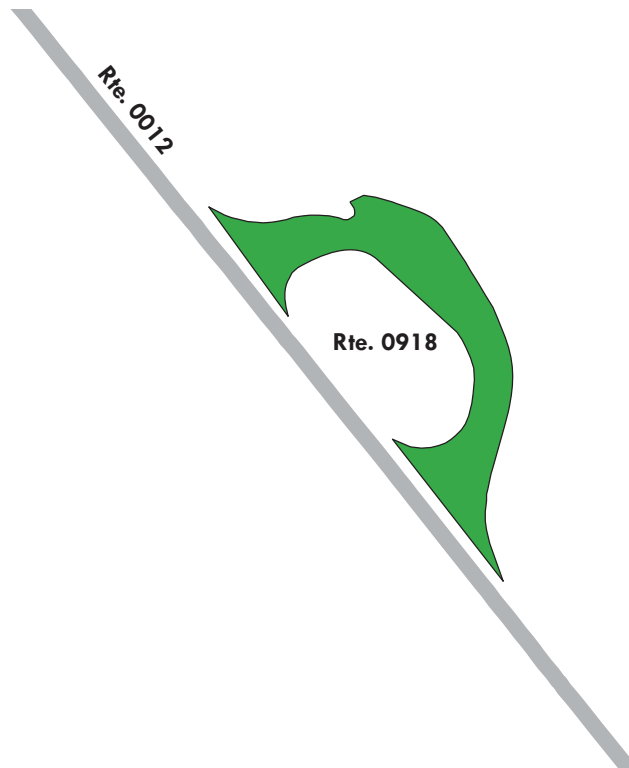
ROUTE 0918: PUHIMAU CRATER PARKING

Manual Rating

FROM ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 0.97 ON LEFT

TO ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 1.01 ON LEFT

| Inspection Date | FMSS Number | User Access | Surface Type | | | | | | |
|--|-------------------------|------------------------|---------------------|------|-----------|-----------|------------|-----------|--|
| 4/19/2014 | 23394 | PUBLIC | ASPHALT | | | | | | |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation | | | | | | |
| 13,441 | 0.23 | 6 | LIGHT REPAIR | | | | | | |
| Curb Type | | Curb & Gutter Type | | | | | | | |
| STONE CURB | | NO CURB AND GUTTER | | | | | | | |
| Culverts | Drop Inlets | Gates | | | | | | | |
| 0 | 0 | 0 | | | | | | | |
| Pavement Recommendation | | Condition Rating / PCR | | | | | | | |
| PREVENTIVE MAINTENANCE | | GOOD / 90 | | | | | | | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | | | | | | | |
| Poor | (0 - 60) | Fair | (61 - 84) | Good | (85 - 94) | Excellent | (95 - 100) | Not Rated | |
| See Appendix for definitions and formulas | | | | | | | | | |



Hawaii Volcanoes National Park

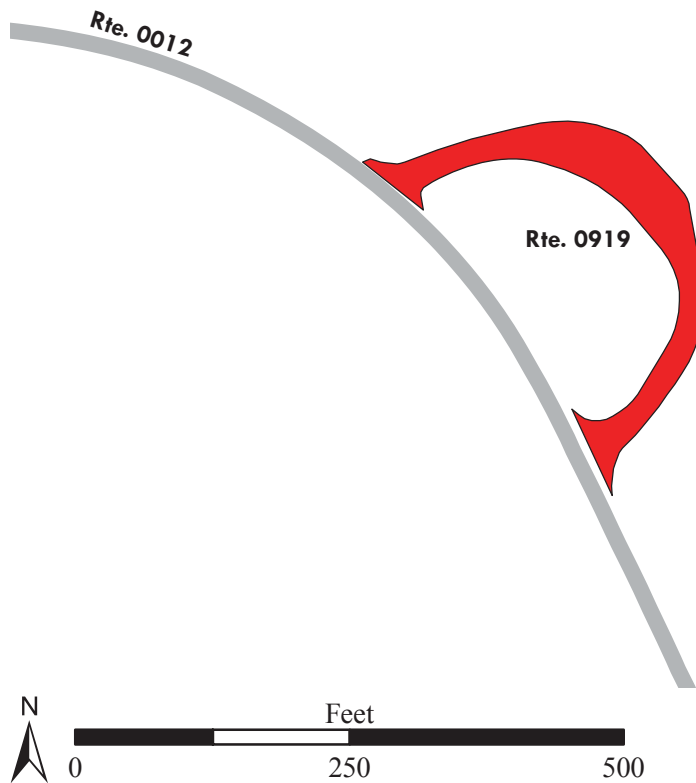
ROUTE 0919: PAUAHI CRATER PARKING

Manual Rating

FROM ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 3.20 ON LEFT

TO ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 3.25 ON LEFT

| Inspection Date | FMSS Number | User Access | Surface Type | | | | | | |
|--|-------------------------|------------------------|---------------------|------|-----------|-----------|------------|-----------|--|
| 4/19/2014 | 42670 | PUBLIC | ASPHALT | | | | | | |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation | | | | | | |
| 16,877 | 0.29 | 6 | MODERATE REPAIR | | | | | | |
| Curb Type | | Curb & Gutter Type | | | | | | | |
| STONE CURB | | NO CURB AND GUTTER | | | | | | | |
| Culverts | Drop Inlets | Gates | | | | | | | |
| 0 | 0 | 0 | | | | | | | |
| Pavement Recommendation | | Condition Rating / PCR | | | | | | | |
| HEAVY 3R TREATMENTS | | POOR / 53 | | | | | | | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | | | | | | | |
| Poor | (0 - 60) | Fair | (61 - 84) | Good | (85 - 94) | Excellent | (95 - 100) | Not Rated | |
| See Appendix for definitions and formulas | | | | | | | | | |



Hawaii Volcanoes National Park

ROUTE 0920: MAUNA ULU LAVA SHIELD PARKING

Manual Rating

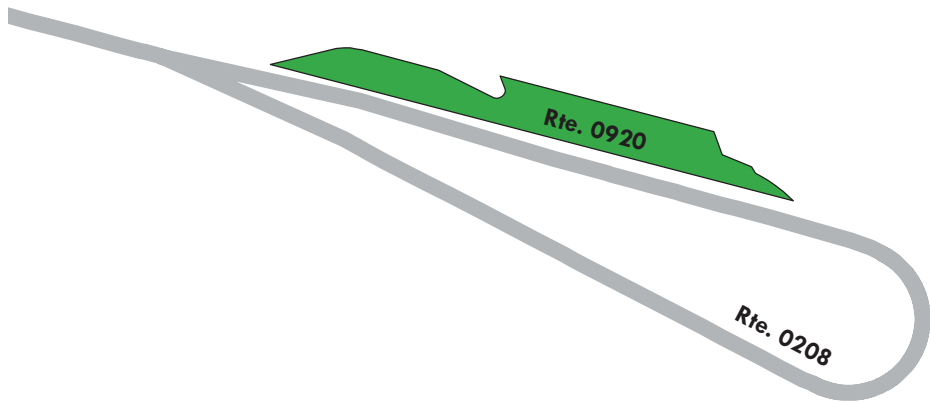
ADJACENT TO ROUTE 0208 (MAUNA ULU ACCESS ROAD) AT END

| Inspection Date | FMSS Number | User Access | Surface Type |
|-------------------------|-------------------------|------------------------|---------------------|
| 4/19/2014 | 23422 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 8,504 | 0.15 | 6 | LIGHT REPAIR |
| Curb Type | | Curb & Gutter Type | |
| STONE CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| PREVENTIVE MAINTENANCE | | GOOD / 90 | |

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)
 Fair (61 - 84)
 Good (85 - 94)
 Excellent (95 - 100)
 Not Rated

See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0921: KEALAKOMO PICNIC AREA PARKING

Manual Rating

FROM ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 9.78 ON RIGHT

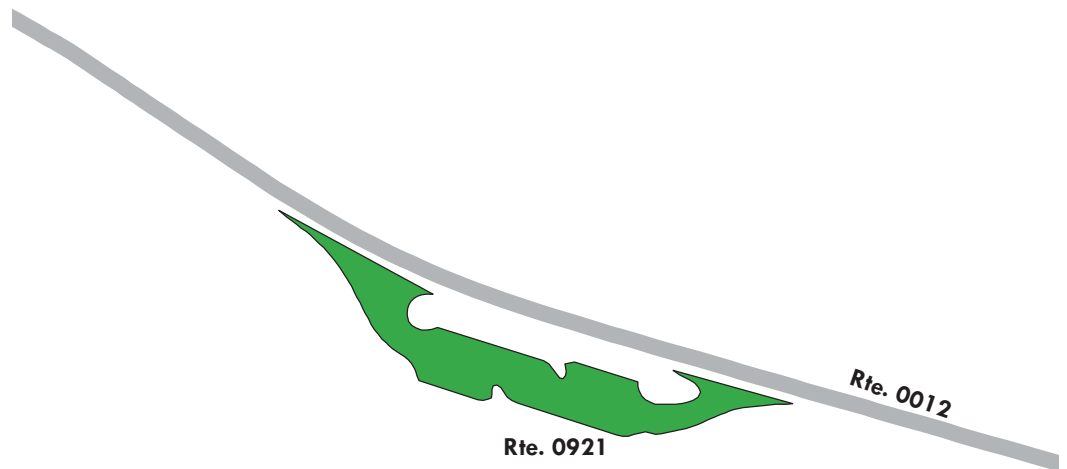
TO ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 9.85 ON RIGHT

| Inspection Date | FMSS Number | User Access | Surface Type |
|-------------------------|-------------------------|------------------------|---------------------|
| 4/20/2014 | 23446 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 17,909 | 0.31 | 5 | LIGHT REPAIR |
| Curb Type | | Curb & Gutter Type | |
| STONE CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| PREVENTIVE MAINTENANCE | | GOOD / 90 | |

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)
 Fair (61 - 84)
 Good (85 - 94)
 Excellent (95 - 100)
 Not Rated

See Appendix for definitions and formulas



Hawaii Volcanoes National Park

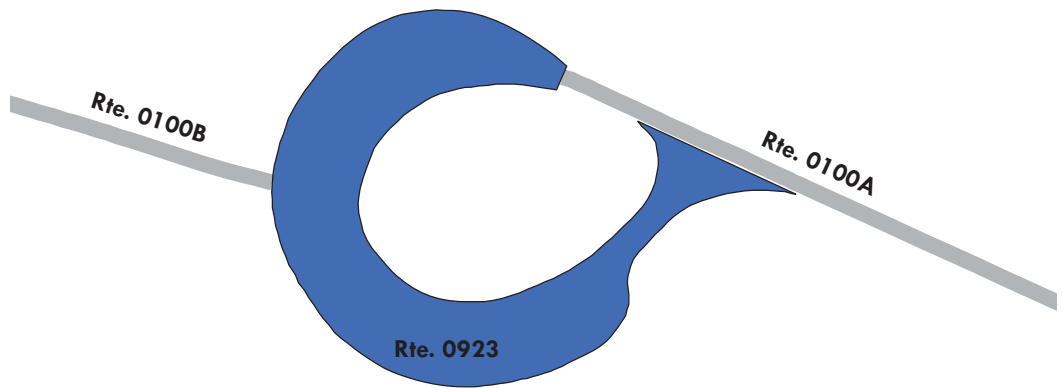
ROUTE 0923: KIPUKA PUAULU TRAILHEAD PARKING

Manual Rating

FROM END OF ROUTE 0100A (MAUNA LOA ROAD)

TO BEGINNING OF ROUTE 0100B (MAUNA LOA LOOKOUT ROAD)

| Inspection Date | FMSS Number | User Access | Surface Type |
|---|-------------------------|------------------------|---------------------|
| 4/12/2014 | 42676 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 26,493 | 0.46 | NOT APPLICABLE | N/A |
| Curb Type | | Curb & Gutter Type | |
| NO CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| DO NOTHING | | EXCELLENT / 97 | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | |
| Poor | (0 - 60) | Fair | (61 - 84) |
| | | Good | (85 - 94) |
| | | Excellent | (95 - 100) |
| | | Not Rated | |
| See Appendix for definitions and formulas | | | |



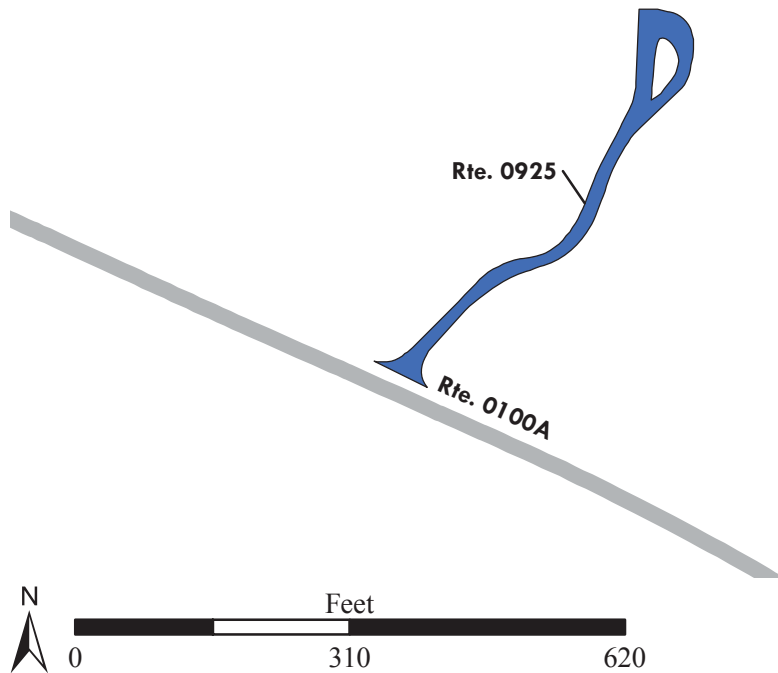
Hawaii Volcanoes National Park

ROUTE 0925: KIPUKA PUAULU DAY USE AREA PARKING

Manual Rating

FROM ROUTE 0100A (MAUNA LOA ROAD) AT MP 1.49 ON RIGHT
TO PARKING

| Inspection Date | FMSS Number | User Access | Surface Type |
|---|--|------------------------|---|
| 4/12/2014 | 42671 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 11,118 | 0.19 | NOT APPLICABLE | N/A |
| Curb Type | | Curb & Gutter Type | |
| NO CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| DO NOTHING | | EXCELLENT / 97 | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | |
| Poor | (0 - 60) | Fair | (61 - 84) |
| | | Good | (85 - 94) |
| | | Excellent | (95 - 100) |
| | | Not Rated | |
| See Appendix for definitions and formulas | | | |



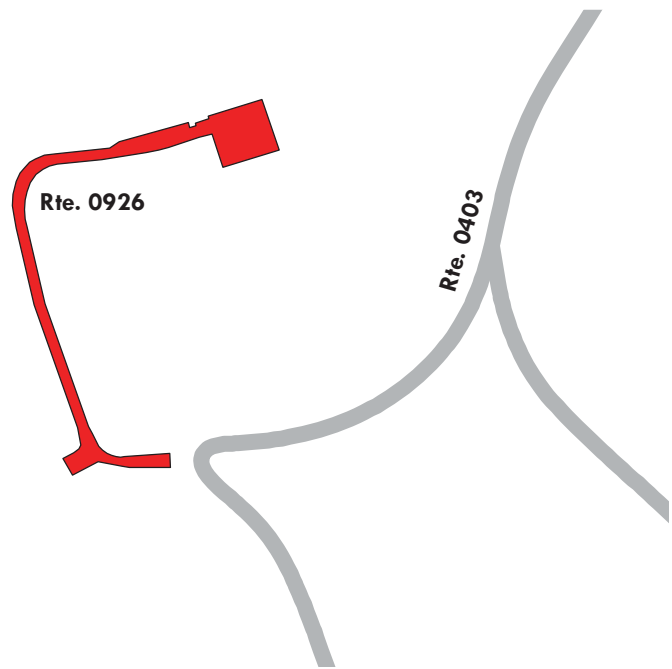
Hawaii Volcanoes National Park

ROUTE 0926: ENVIRONMENTAL EDUCATION CENTER PARKING

Manual Rating

FROM ROUTE 0403 (SOUTH RESIDENCE LOOP) AT MP 0.14 ON RIGHT
TO PARKING

| Inspection Date | FMSS Number | User Access | Surface Type |
|---|--|------------------------|---|
| 4/9/2014 | 113876 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 11,550 | 0.20 | NOT APPLICABLE | N/A |
| Curb Type | | Curb & Gutter Type | |
| NO CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| HEAVY 3R TREATMENTS | | POOR / 53 | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | |
| Poor | (0 - 60) | Fair | (61 - 84) |
| | | Good | (85 - 94) |
| | | Excellent | (95 - 100) |
| | | Not Rated | |
| See Appendix for definitions and formulas | | | |



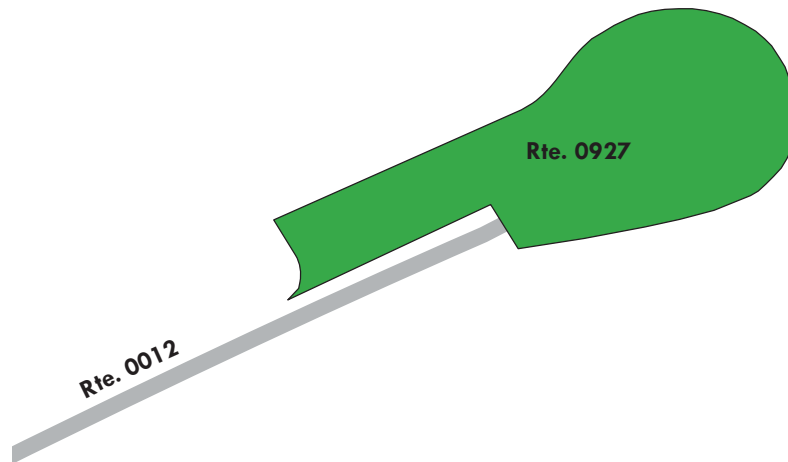
Hawaii Volcanoes National Park

ROUTE 0927: ERUPTION SITE TURN-AROUND PARKING

Manual Rating

FROM END OF ROUTE 0012 (CHAIN OF CRATERS ROAD) AT END
TO PARKING

| Inspection Date | FMSS Number | User Access | Surface Type |
|---|--|------------------------|---|
| 4/20/2014 | 23493 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 9,984 | 0.17 | 5 | LIGHT REPAIR |
| Curb Type | | Curb & Gutter Type | |
| STONE CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| PREVENTIVE MAINTENANCE | | GOOD / 90 | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | |
| Poor | (0 - 60) | Fair | (61 - 84) |
| | | Good | (85 - 94) |
| | | Excellent | (95 - 100) |
| | | Not Rated | |
| See Appendix for definitions and formulas | | | |



Hawaii Volcanoes National Park

ROUTE 0928: TREE MOLDS PARKING

Manual Rating

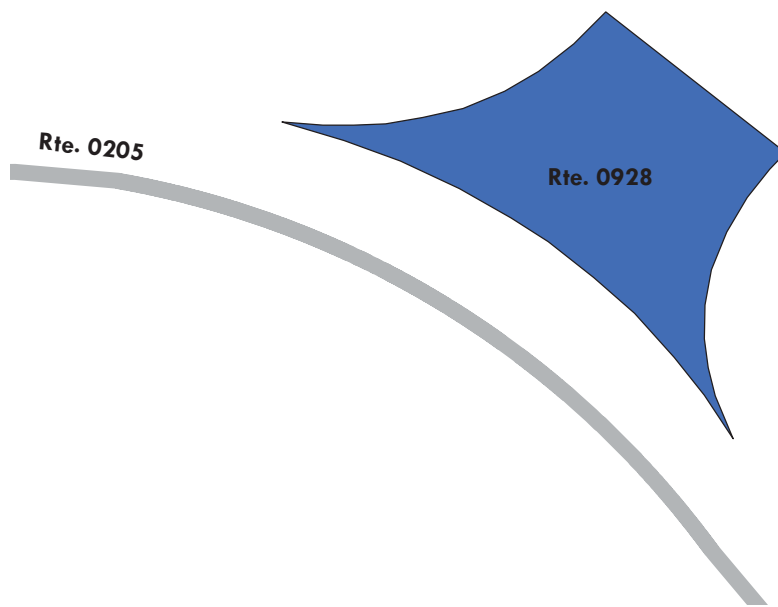
ADJACENT TO ROUTE 0205 (TREE MOLDS ROAD) AT MP 0.44 ON RIGHT

| Inspection Date | FMSS Number | User Access | Surface Type |
|-------------------------|-------------------------|------------------------|---------------------|
| 4/12/2014 | 113875 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 1,045 | 0.02 | NOT APPLICABLE | N/A |
| Curb Type | | Curb & Gutter Type | |
| NO CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| DO NOTHING | | EXCELLENT / 97 | |

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60) Fair (61 - 84) Good (85 - 94) Excellent (95 - 100) Not Rated

See Appendix for definitions and formulas



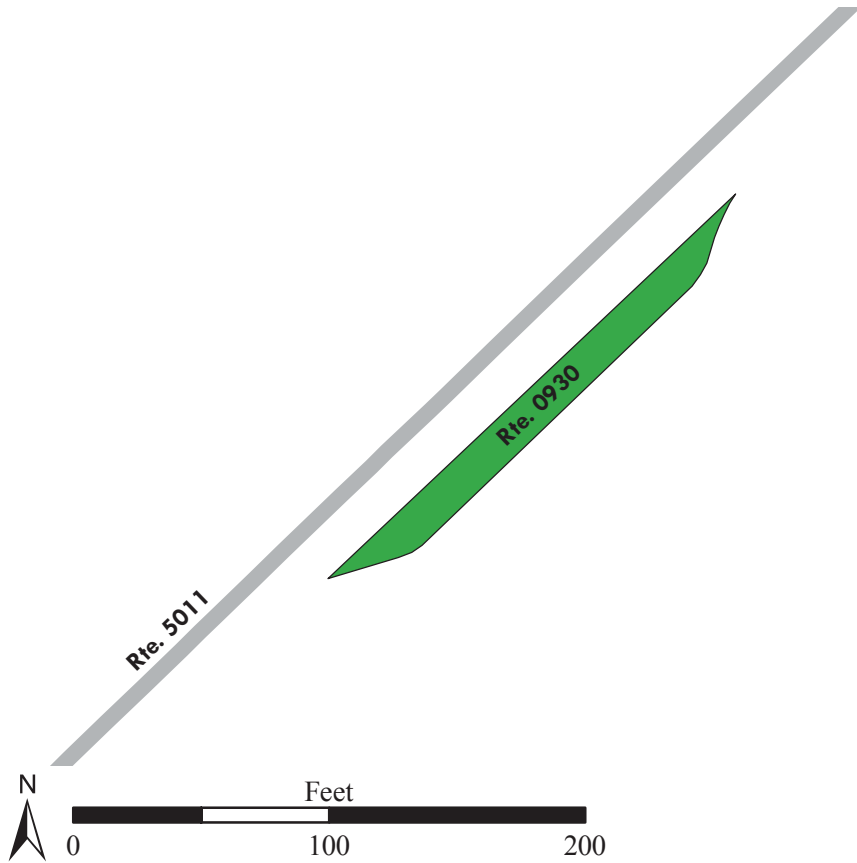
Hawaii Volcanoes National Park

ROUTE 0930: FOOTPRINTS TRAILHEAD PARKING AREA

Manual Rating

ADJACENT TO ROUTE 5011 (HAWAII STATE ROUTE 11 (HAWAII BELT ROAD / MAMALAHOA HIGHWAY))

| Inspection Date | FMSS Number | User Access | Surface Type |
|---|--|------------------------|---|
| 4/20/2014 | 22876 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 2,634 | 0.04 | NOT APPLICABLE | N/A |
| Curb Type | | Curb & Gutter Type | |
| NO CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| PREVENTIVE MAINTENANCE | | GOOD / 90 | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | |
| Poor | (0 - 60) | Fair | (61 - 84) |
| | | Good | (85 - 94) |
| | | Excellent | (95 - 100) |
| | | Not Rated | |
| See Appendix for definitions and formulas | | | |



Hawaii Volcanoes National Park
ROUTE 0931ZZ: KEANAKAKOI PARKING AREAS

ADJACENT TO ROUTE 0010 (CRATER RIM DRIVE) (NORTH AND SOUTH)

Route 0931ZZ could not be collected for GPS, condition, and features in Cycle 5 because the parking area was inaccessible due to hazardous volcanic gas conditions.

This is the summary route for subcomponents 0931AZ and 0931BZ.

Hawaii Volcanoes National Park
ROUTE 0932: SOUTH WEST RIFT ZONE PARKING

ADJACENT TO ROUTE 0010 (CRATER RIM DRIVE)

Route 0932 could not be collected for GPS, condition, and features in Cycle 5 because the parking area was inaccessible due to hazardous volcanic gas conditions.

Hawaii Volcanoes National Park

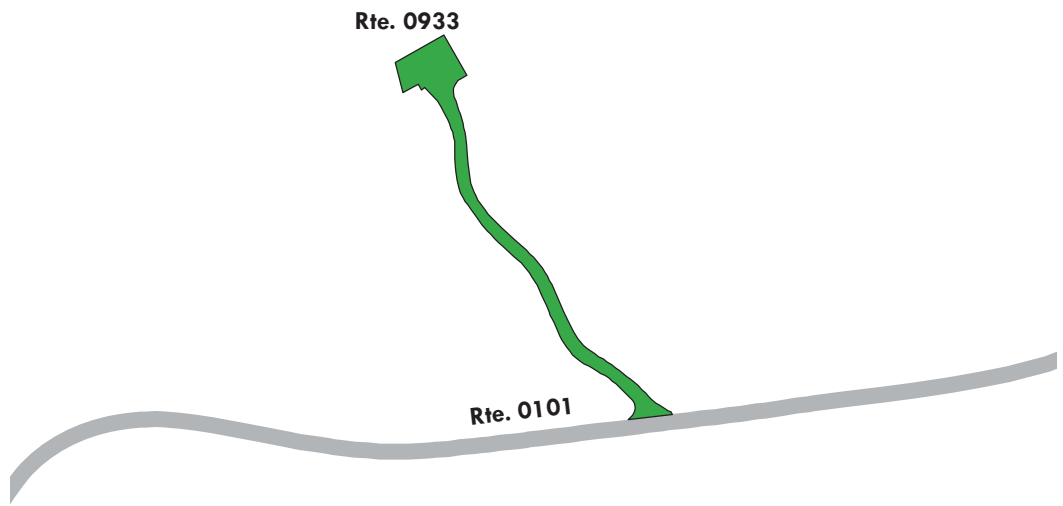
ROUTE 0933: KULANAOKUAIKI CAMPGROUND PARKING

Manual Rating

FROM ROUTE 0101 (HILINA PALI ROAD) AT MP 3.61 ON RIGHT

TO END

| Inspection Date | FMSS Number | User Access | Surface Type |
|--|-------------------------|------------------------|---------------------|
| 4/20/2014 | 42511 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 10,527 | 0.18 | NOT APPLICABLE | N/A |
| Curb Type | | Curb & Gutter Type | |
| NO CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| PREVENTIVE MAINTENANCE | | GOOD / 90 | |
| Route Condition Legend – Pavement Condition Rating (PCR) Poor (0 - 60) Fair (61 - 84) Good (85 - 94) Excellent (95 - 100) Not Rated See Appendix for definitions and formulas | | | |



Hawaii Volcanoes National Park

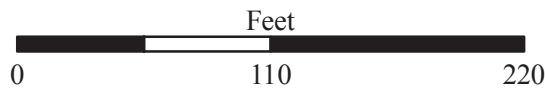
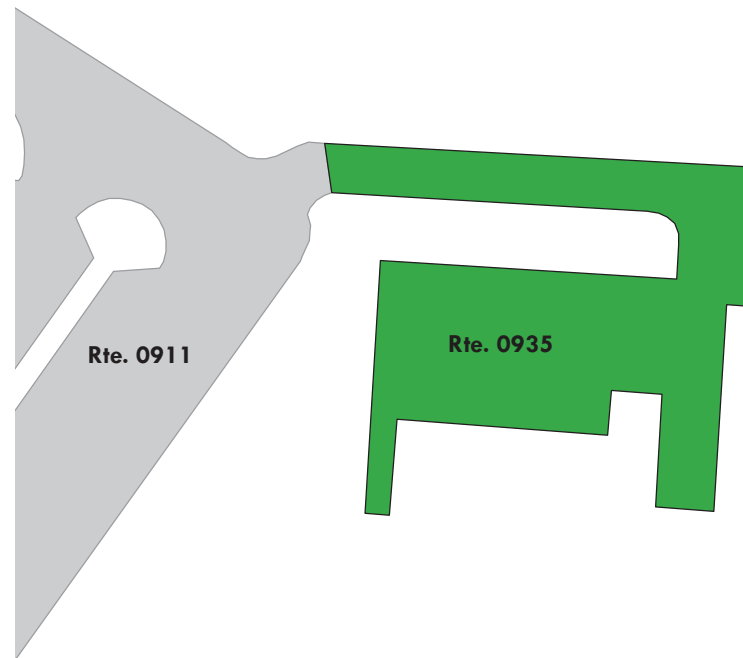
ROUTE 0935: JAGGER EMPLOYEE PARKING

Manual Rating

FROM ROUTE 0911 (VOLCANO OBSERVATORY PARKING)

TO PARKING

| Inspection Date | FMSS Number | User Access | Surface Type | | | | | | |
|--|-------------------------|------------------------|---------------------|------|-----------|-----------|------------|-----------|--|
| 4/9/2014 | 239122 | NONPUBLIC | ASPHALT | | | | | | |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation | | | | | | |
| 15,199 | 0.26 | 5 | LIGHT REPAIR | | | | | | |
| Curb Type | | Curb & Gutter Type | | | | | | | |
| STONE CURB | | NO CURB AND GUTTER | | | | | | | |
| Culverts | Drop Inlets | Gates | | | | | | | |
| 0 | 0 | 0 | | | | | | | |
| Pavement Recommendation | | Condition Rating / PCR | | | | | | | |
| PREVENTIVE MAINTENANCE | | GOOD / 90 | | | | | | | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | | | | | | | |
| Poor | (0 - 60) | Fair | (61 - 84) | Good | (85 - 94) | Excellent | (95 - 100) | Not Rated | |
| See Appendix for definitions and formulas | | | | | | | | | |



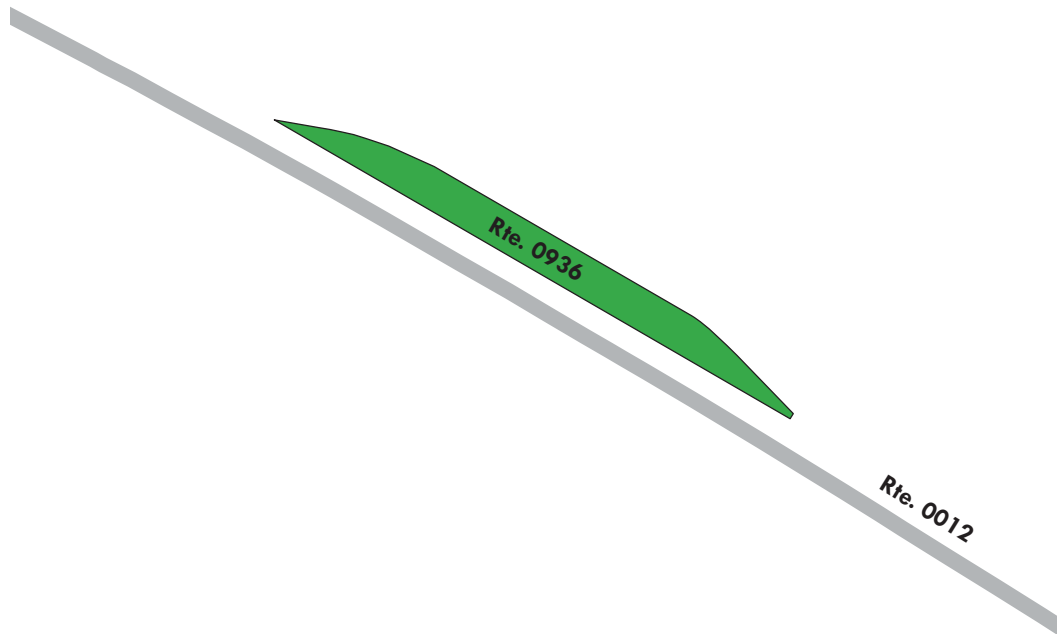
Hawaii Volcanoes National Park

ROUTE 0936: PU'U LOA PETROGLYPHS PARKING

Manual Rating

ADJACENT TO ROUTE 0012 (CHAIN OF CRATERS ROAD)

| Inspection Date | FMSS Number | User Access | Surface Type |
|--|-------------------------|------------------------|---------------------|
| 4/20/2014 | 239124 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 4,127 | 0.07 | 6 | LIGHT REPAIR |
| Curb Type | | Curb & Gutter Type | |
| STONE CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| PREVENTIVE MAINTENANCE | | GOOD / 90 | |
| Route Condition Legend – Pavement Condition Rating (PCR) Poor (0 - 60) Fair (61 - 84) Good (85 - 94) Excellent (95 - 100) Not Rated See Appendix for definitions and formulas | | | |



Hawaii Volcanoes National Park

ROUTE 0937ZZ: KILAUEA MILITARY CAMP PARKING AREAS

Summary Route

Manual Rating

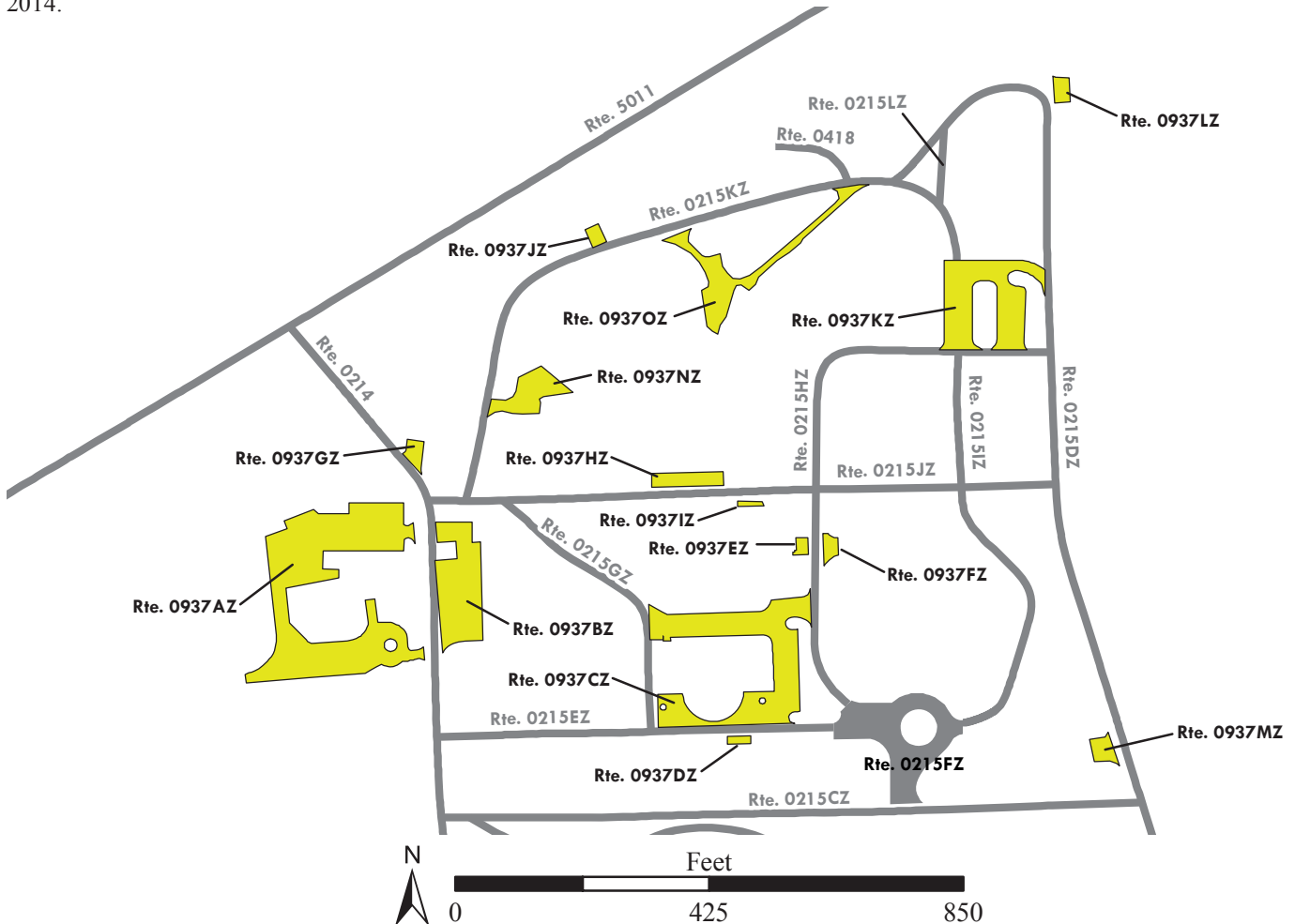
FROM ROUTES 0214 (KILAUEA MILITARY CAMP ROAD) AND 0215ZZ (KILAUEA MILITARY CAMP ROADS)

THROUGH KILAUEA MILITARY CAMP

| Inspection Date | FMSS Number | User Access | Surface Type |
|--|-------------------------|------------------------|--------------|
| 4/9/2014 | 239125 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Condition Rating / PCR | |
| 110,773 | 1.90 | SUMMARY / 81 | |
| Culverts | Drop Inlets | Gates | |
| 1 | 3 | 4 | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | |
| Poor | (0 - 60) | Fair | (61 - 84) |
| | | Good | (85 - 94) |
| | | Excellent | (95 - 100) |
| | | Not Rated | |
| See Appendix for definitions and formulas | | | |

The condition shown on this page reflects the overall condition; it may not reflect individual subcomponent condition ratings.

Note: Subcomponents 0937MZ, 0937NZ, and 0937OZ were collected during the 2014 Cycle 5 collection. They were not collected during the 2012 Cycle 5 collection trip because they were unpaved. Thus, summary totals for 0937ZZ will vary between 2012 and 2014.



Hawaii Volcanoes National Park

ROUTE 0937AZ: KILAUEA MILITARY CAMP PARKING A

Subcomponent of Route HAVO-0937ZZ

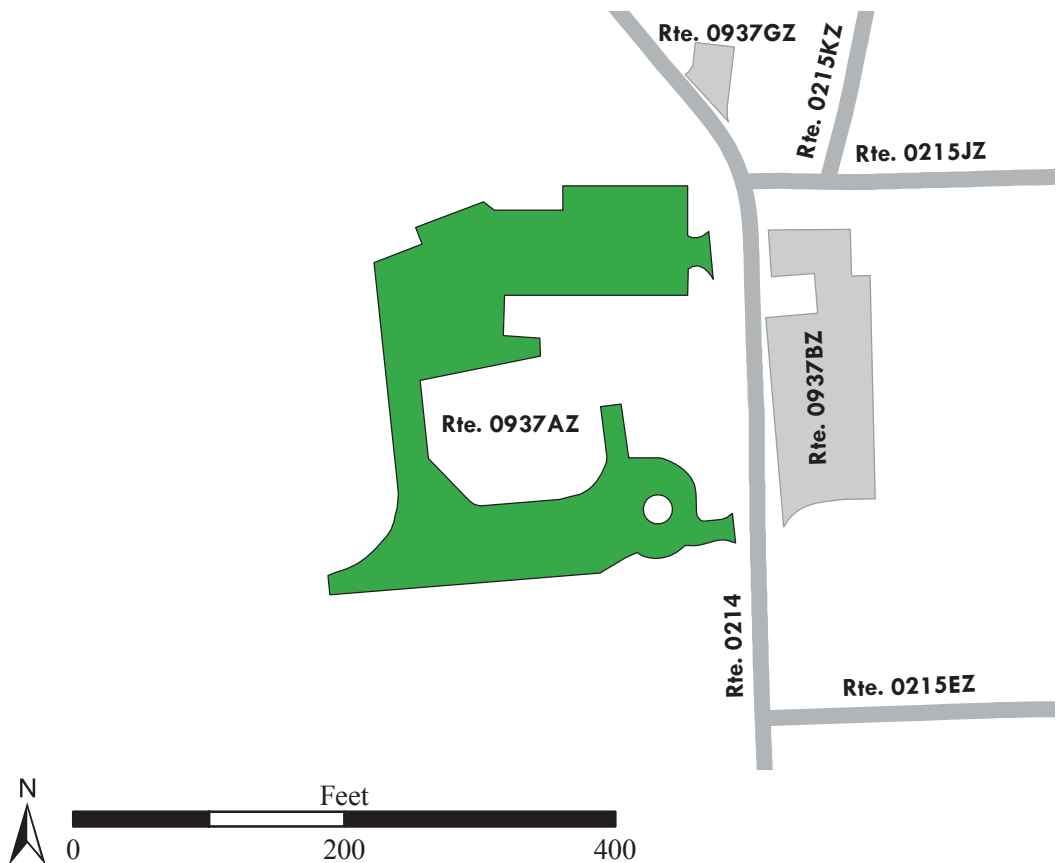
Manual Rating

FROM ROUTE 0214 (KILAUEA MILITARY CAMP ROAD)

TO ROUTE 0214 (KILAUEA MILITARY CAMP ROAD)

| Inspection Date | FMSS Number | User Access | Surface Type |
|---|-------------------------|------------------------|---------------------|
| 4/9/2014 | 239125 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 37,398 | 0.64 | NOT APPLICABLE | N/A |
| Curb Type | | Curb & Gutter Type | |
| NO CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 2 | 4 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| PREVENTIVE MAINTENANCE | | GOOD / 90 | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | |
| Poor | (0 - 60) | Fair | (61 - 84) |
| Good | (85 - 94) | Excellent | (95 - 100) |
| | | | Not Rated |
| See Appendix for definitions and formulas | | | |

Parking area consists of multiple surface types. 1 part asphalt at 35,770 square feet; 1 part concrete at 1,628 square feet.



Hawaii Volcanoes National Park

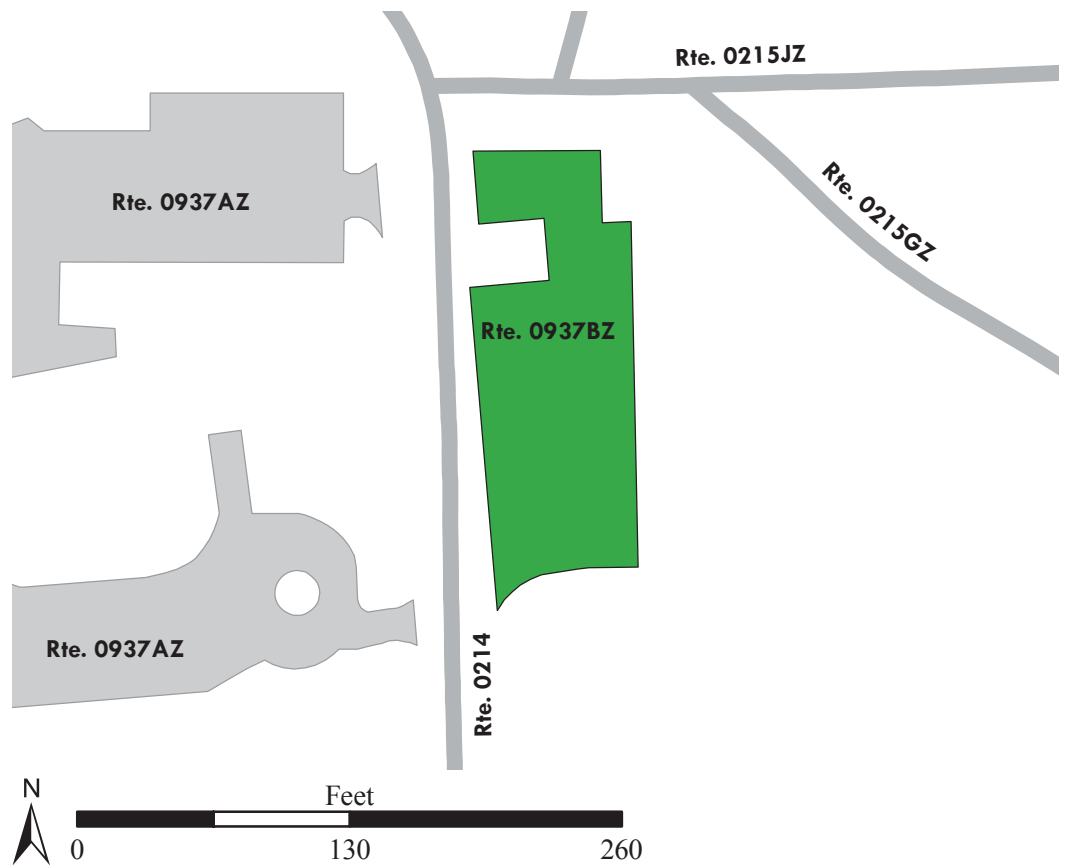
ROUTE 0937BZ: KILAUEA MILITARY CAMP PARKING B

Subcomponent of Route HAVO-0937ZZ

Manual Rating

ADJACENT TO ROUTES 0214 (KILAUEA MILITARY CAMP ROAD) AND 0215JZ (KILAUEA MILITARY CAMP ROAD J)

| Inspection Date | FMSS Number | User Access | Surface Type |
|---|-------------------------|------------------------|---------------------|
| 4/9/2014 | 239125 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 12,623 | 0.22 | NOT APPLICABLE | N/A |
| Curb Type | | Curb & Gutter Type | |
| NO CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| PREVENTIVE MAINTENANCE | | GOOD / 90 | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | |
| Poor | (0 - 60) | Fair | (61 - 84) |
| | | Good | (85 - 94) |
| | | Excellent | (95 - 100) |
| | | Not Rated | |
| See Appendix for definitions and formulas | | | |



Hawaii Volcanoes National Park

ROUTE 0937CZ: KILAUEA MILITARY CAMP PARKING C

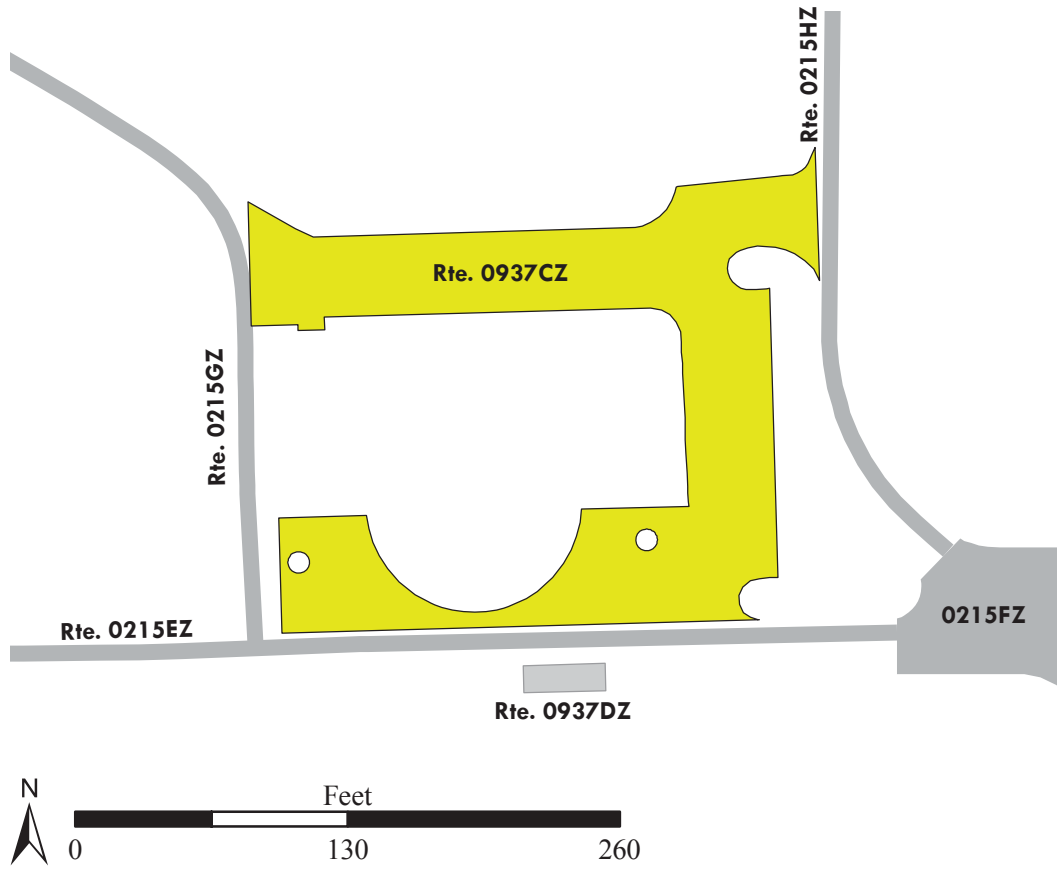
Subcomponent of Route HAVO-0937ZZ

Manual Rating

FROM ROUTES 0215EZ (KILAUEA MILITARY CAMP ROAD E), 0215GZ (KILAUEA MILITARY CAMP ROAD G), AND 0215HZ (KILAUEA MILITARY CAMP ROAD H)
TO PARKING

| Inspection Date | FMSS Number | User Access | Surface Type |
|---|-------------------------|------------------------|---------------------|
| 4/9/2014 | 239125 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 22,990 | 0.40 | 4 | LIGHT REPAIR |
| Curb Type | | Curb & Gutter Type | |
| STONE CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 1 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| LIGHT 3R TREATMENTS | | FAIR / 73 | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | |
| Poor | (0 - 60) | Fair | (61 - 84) |
| | | Good | (85 - 94) |
| | | Excellent | (95 - 100) |
| | | Not Rated | |
| See Appendix for definitions and formulas | | | |

Parking area consists of multiple surface types. 1 part asphalt at 22,892 square feet; 1 part concrete at 98 square feet.



Hawaii Volcanoes National Park

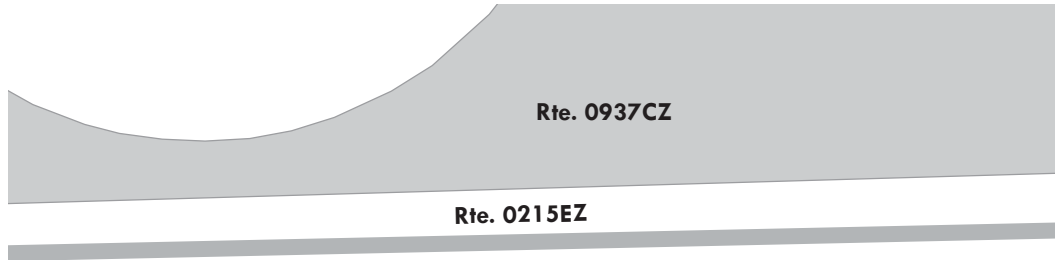
ROUTE 0937DZ: KILAUEA MILITARY CAMP PARKING D

Subcomponent of Route HAVO-0937ZZ

Manual Rating

ADJACENT TO ROUTE 0215EZ (KILAUEA MILITARY CAMP ROAD E)

| Inspection Date | FMSS Number | User Access | Surface Type |
|---|-------------------------|------------------------|---------------------|
| 4/9/2014 | 239125 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 476 | 0.01 | 5 | LIGHT REPAIR |
| Curb Type | | Curb & Gutter Type | |
| STONE CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| DO NOTHING | | EXCELLENT / 97 | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | |
| Poor | (0 - 60) | Fair | (61 - 84) |
| | | Good | (85 - 94) |
| | | Excellent | (95 - 100) |
| | | Not Rated | |
| See Appendix for definitions and formulas | | | |



Hawaii Volcanoes National Park

ROUTE 0937EZ: KILAUEA MILITARY CAMP PARKING E

Subcomponent of Route HAVO-0937ZZ

Manual Rating

ADJACENT TO ROUTE 0215HZ (KILAUEA MILITARY CAMP ROAD H)

| Inspection Date | FMSS Number | User Access | Surface Type |
|---|-------------------------|------------------------|---------------------|
| 4/9/2014 | 239125 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 565 | 0.01 | NOT APPLICABLE | N/A |
| Curb Type | | Curb & Gutter Type | |
| NO CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| HEAVY 3R TREATMENTS | | POOR / 53 | |
| Route Condition Legend – Pavement Condition Rating (PCR) Poor (0 - 60) Fair (61 - 84) Good (85 - 94) Excellent (95 - 100) Not Rated | | | |
| See Appendix for definitions and formulas | | | |



Hawaii Volcanoes National Park

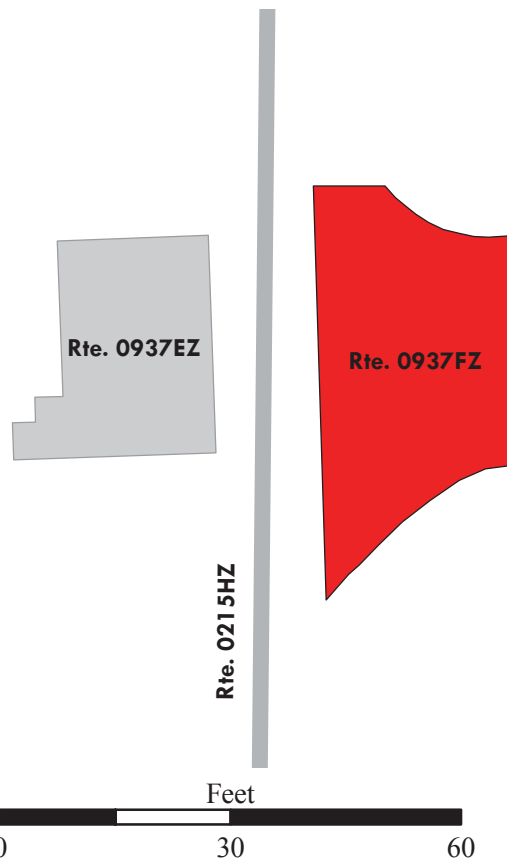
ROUTE 0937FZ: KILAUEA MILITARY CAMP PARKING F

Subcomponent of Route HAVO-0937ZZ

Manual Rating

ADJACENT TO ROUTE 0215HZ (KILAUEA MILITARY CAMP ROAD H)

| Inspection Date | FMSS Number | User Access | Surface Type |
|---|-------------------------|------------------------|---------------------|
| 4/9/2014 | 239125 | PUBLIC | CONCRETE |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 943 | 0.02 | 3 | LIGHT REPAIR |
| Curb Type | | Curb & Gutter Type | |
| STONE CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| HEAVY 3R TREATMENTS | | POOR / 53 | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | |
| Poor | (0 - 60) | Fair | (61 - 84) |
| | | Good | (85 - 94) |
| | | Excellent | (95 - 100) |
| | | Not Rated | |
| See Appendix for definitions and formulas | | | |



Hawaii Volcanoes National Park

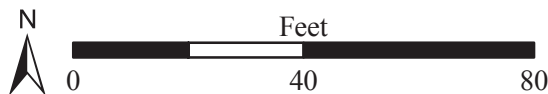
ROUTE 0937GZ: KILAUEA MILITARY CAMP PARKING G

Subcomponent of Route HAVO-0937ZZ

Manual Rating

ADJACENT TO ROUTE 0214 (KILAUEA MILITARY CAMP ROAD)

| Inspection Date | FMSS Number | User Access | Surface Type |
|---|-------------------------|------------------------|---------------------|
| 4/9/2014 | 239125 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 1,135 | 0.02 | NOT APPLICABLE | N/A |
| Curb Type | | Curb & Gutter Type | |
| NO CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| PREVENTIVE MAINTENANCE | | GOOD / 90 | |
| Route Condition Legend – Pavement Condition Rating (PCR) Poor (0 - 60) Fair (61 - 84) Good (85 - 94) Excellent (95 - 100) Not Rated | | | |
| See Appendix for definitions and formulas | | | |



Hawaii Volcanoes National Park

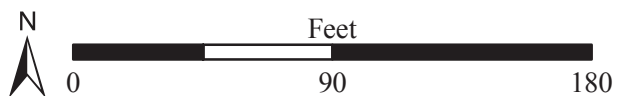
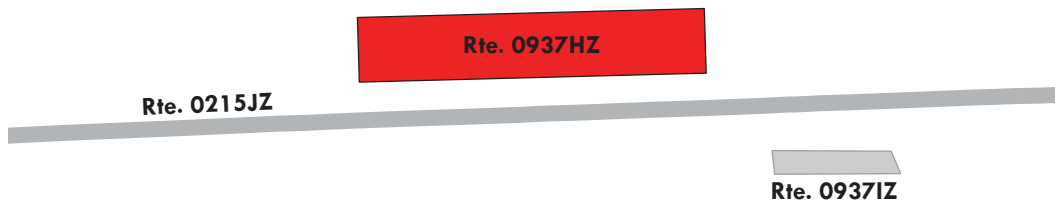
ROUTE 0937HZ: KILAUEA MILITARY CAMP PARKING H

Subcomponent of Route HAVO-0937ZZ

Manual Rating

ADJACENT TO ROUTE 0215JZ (KILAUEA MILITARY CAMP ROAD J)

| Inspection Date | FMSS Number | User Access | Surface Type |
|---|-------------------------|------------------------|---------------------|
| 4/9/2014 | 239125 | PUBLIC | CONCRETE |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 2,548 | 0.04 | NOT APPLICABLE | N/A |
| Curb Type | | Curb & Gutter Type | |
| NO CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| HEAVY 3R TREATMENTS | | POOR / 53 | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | |
| Poor | (0 - 60) | Fair | (61 - 84) |
| | | Good | (85 - 94) |
| | | Excellent | (95 - 100) |
| | | Not Rated | |
| See Appendix for definitions and formulas | | | |



Hawaii Volcanoes National Park

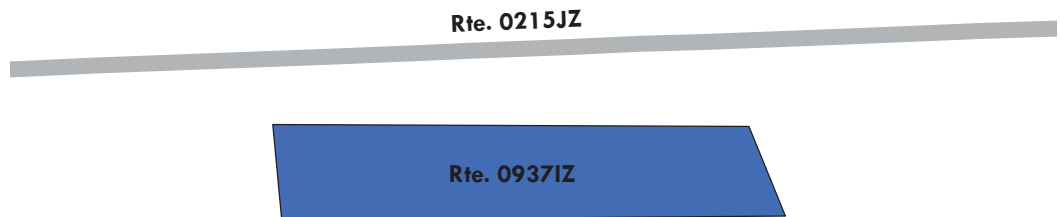
ROUTE 0937IZ: KILAUEA MILITARY CAMP PARKING I

Subcomponent of Route HAVO-0937ZZ

Manual Rating

ADJACENT TO ROUTE 0215JZ (KILAUEA MILITARY CAMP ROAD J)

| Inspection Date | FMSS Number | User Access | Surface Type |
|--|-------------------------|------------------------|---------------------|
| 4/9/2014 | 239125 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 322 | 0.01 | 3 | MODERATE REPAIR |
| Curb Type | | Curb & Gutter Type | |
| STONE CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| DO NOTHING | | EXCELLENT / 97 | |
| Route Condition Legend – Pavement Condition Rating (PCR) Poor (0 - 60) Fair (61 - 84) Good (85 - 94) Excellent (95 - 100) Not Rated See Appendix for definitions and formulas | | | |



Hawaii Volcanoes National Park

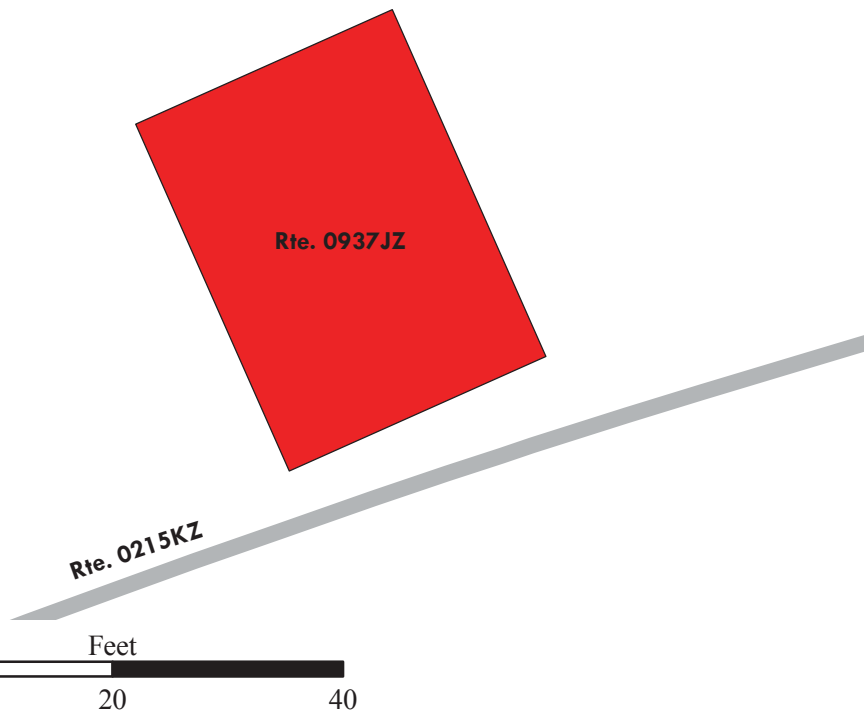
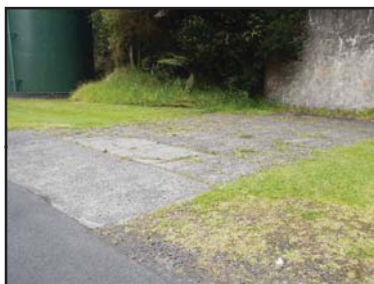
ROUTE 0937JZ: KILAUEA MILITARY CAMP PARKING J

Subcomponent of Route HAVO-0937ZZ

Manual Rating

ADJACENT TO ROUTE 0215KZ (KILAUEA MILITARY CAMP ROAD K)

| Inspection Date | FMSS Number | User Access | Surface Type |
|--|-------------------------|------------------------|---------------------|
| 4/9/2014 | 239125 | PUBLIC | CONCRETE |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 756 | 0.01 | NOT APPLICABLE | N/A |
| Curb Type | | Curb & Gutter Type | |
| NO CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| RECONSTRUCTION | | POOR / 30 | |
| Route Condition Legend – Pavement Condition Rating (PCR) Poor (0 - 60) Fair (61 - 84) Good (85 - 94) Excellent (95 - 100) Not Rated See Appendix for definitions and formulas | | | |



Hawaii Volcanoes National Park

ROUTE 0937KZ: KILAUEA MILITARY CAMP PARKING K

Subcomponent of Route HAVO-0937ZZ

Manual Rating

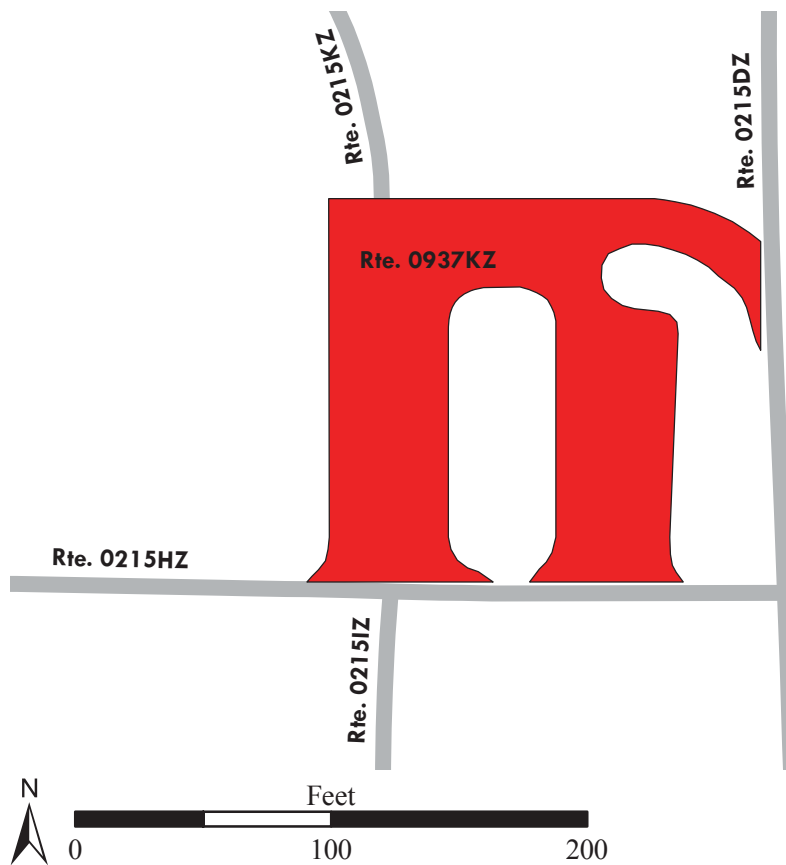
FROM ROUTES 0215DZ (KILAUEA MILITARY CAMP ROAD D), 0215HZ (KILAUEA MILITARY CAMP ROAD H), AND 0215KZ (KILAUEA MILITARY CAMP ROAD K)
TO PARKING

| Inspection Date | FMSS Number | User Access | Surface Type |
|-------------------------|-------------------------|------------------------|---------------------|
| 4/9/2014 | 239125 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 14,934 | 0.26 | NOT APPLICABLE | N/A |
| Curb Type | | Curb & Gutter Type | |
| NO CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| HEAVY 3R TREATMENTS | | POOR / 53 | |

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)
 Fair (61 - 84)
 Good (85 - 94)
 Excellent (95 - 100)
 Not Rated

See Appendix for definitions and formulas



Hawaii Volcanoes National Park

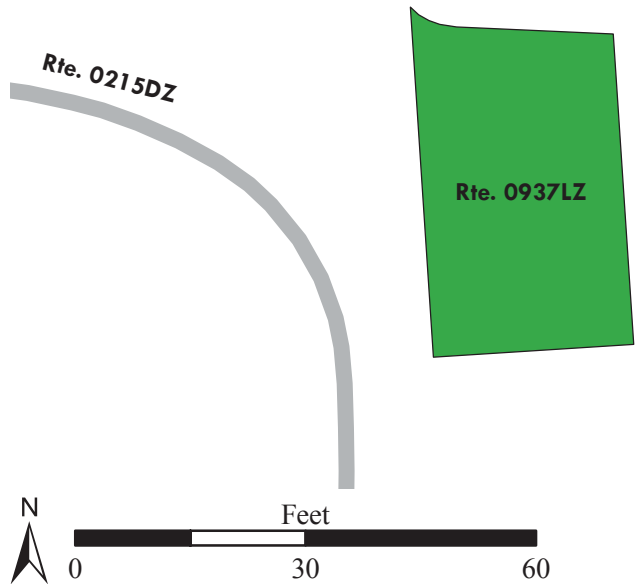
ROUTE 0937LZ: KILAUEA MILITARY CAMP PARKING L

Subcomponent of Route HAVO-0937ZZ

Manual Rating

ADJACENT TO ROUTE 0215DZ (KILAUEA MILITARY CAMP ROAD D)

| Inspection Date | FMSS Number | User Access | Surface Type |
|---|-------------------------|------------------------|---------------------|
| 4/9/2014 | 239125 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 1,033 | 0.02 | NOT APPLICABLE | N/A |
| Curb Type | | Curb & Gutter Type | |
| NO CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| PREVENTIVE MAINTENANCE | | GOOD / 90 | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | |
| Poor | (0 - 60) | Fair | (61 - 84) |
| | | Good | (85 - 94) |
| | | Excellent | (95 - 100) |
| | | Not Rated | |
| See Appendix for definitions and formulas | | | |



Hawaii Volcanoes National Park

ROUTE 0937MZ: KILAUEA MILITARY CAMP PARKING M

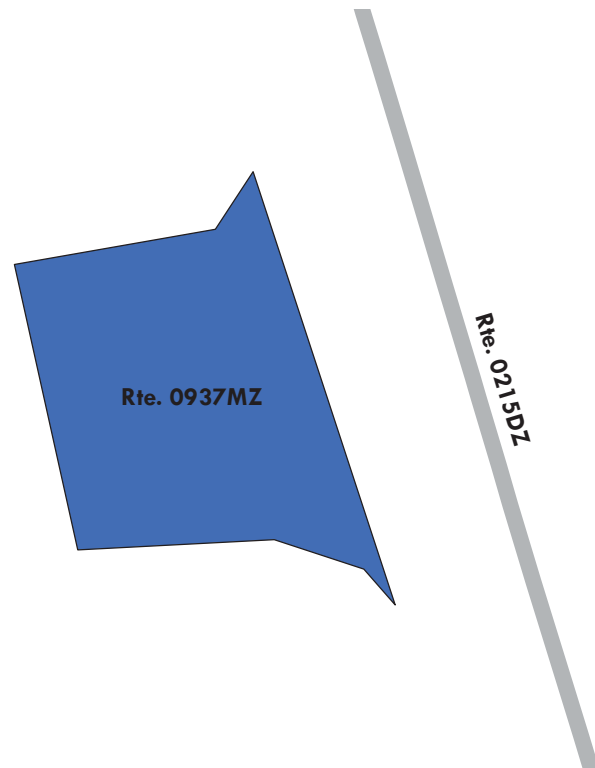
Subcomponent of Route HAVO-0937ZZ

Manual Rating

ADJACENT TO ROUTE 0215DZ (KILAUEA MILITARY CAMP ROAD D)

| Inspection Date | FMSS Number | User Access | Surface Type |
|---|--|------------------------|---|
| 4/10/2014 | 239125 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 1,410 | 0.02 | NOT APPLICABLE | N/A |
| Curb Type | | Curb & Gutter Type | |
| NO CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| DO NOTHING | | EXCELLENT / 97 | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | |
| Poor | (0 - 60) | Fair | (61 - 84) |
| | | Good | (85 - 94) |
| | | Excellent | (95 - 100) |
| | | Not Rated | |
| See Appendix for definitions and formulas | | | |

Note: Parking area was added to the inventory in 2014 and was not collected during the 2012 Cycle 5 collection trip.



Hawaii Volcanoes National Park

ROUTE 0937NZ: KILAUEA MILITARY CAMP PARKING N

Subcomponent of Route HAVO-0937ZZ

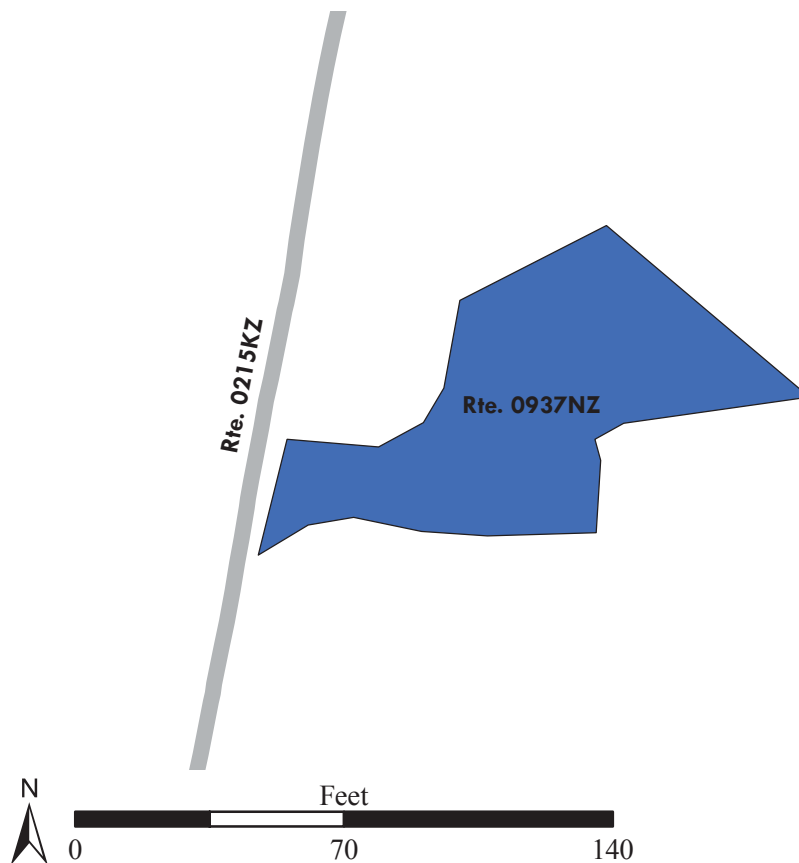
Manual Rating

FROM ROUTE 0215KZ (KILAUEA MILITARY CAMP ROAD K)

TO PARKING

| Inspection Date | FMSS Number | User Access | Surface Type |
|---|-------------------------|------------------------|---------------------|
| 4/10/2014 | 239125 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 4,965 | 0.09 | NOT APPLICABLE | N/A |
| Curb Type | | Curb & Gutter Type | |
| NO CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 1 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| DO NOTHING | | EXCELLENT / 97 | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | |
| Poor | (0 - 60) | Fair | (61 - 84) |
| | | Good | (85 - 94) |
| | | Excellent | (95 - 100) |
| | | Not Rated | |
| See Appendix for definitions and formulas | | | |

Note: Parking area was added to the inventory in 2014 and was not collected during the 2012 Cycle 5 collection trip.



Hawaii Volcanoes National Park

ROUTE 0937OZ: KILAUEA MILITARY CAMP PARKING O

Subcomponent of Route HAVO-0937ZZ

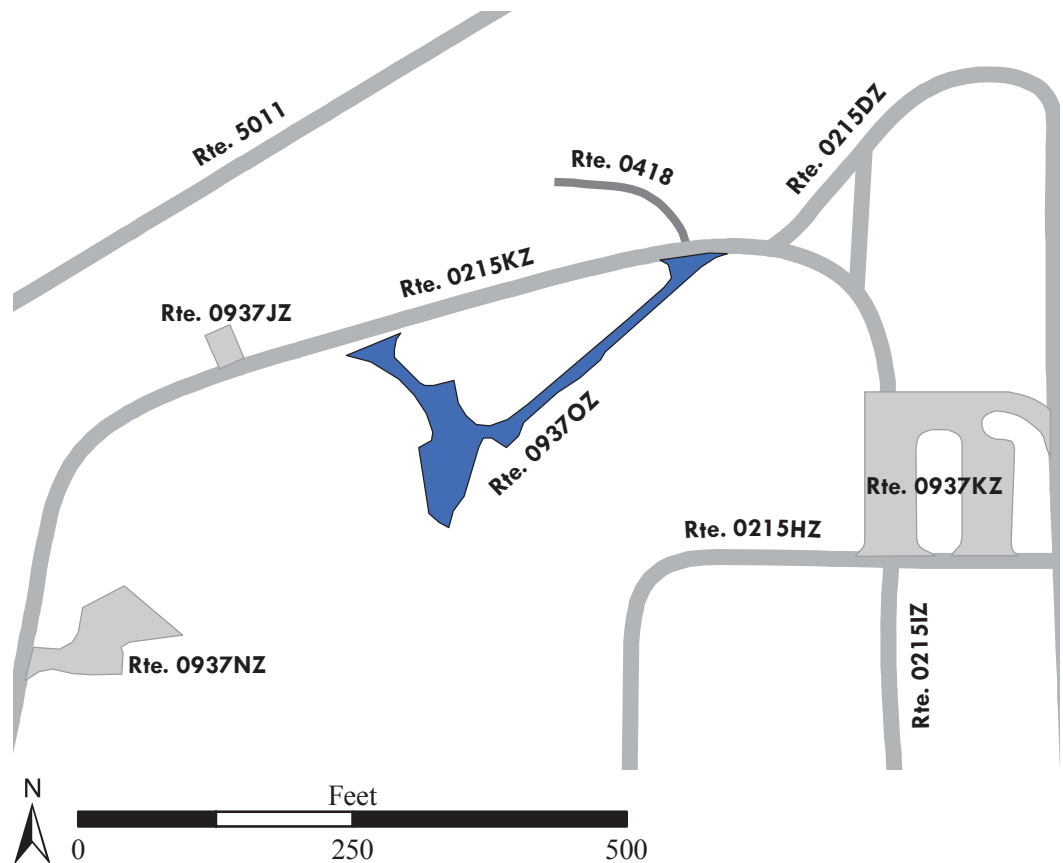
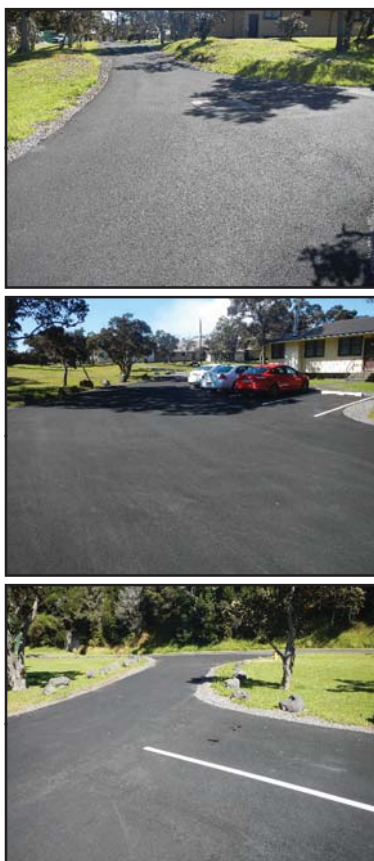
Manual Rating

FROM ROUTE 0215KZ (KILAUEA MILITARY CAMP ROAD K)

TO ROUTE 0215KZ (KILAUEA MILITARY CAMP ROAD K)

| Inspection Date | FMSS Number | User Access | Surface Type |
|---|-------------------------|------------------------|---------------------|
| 4/10/2014 | 239125 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 8,675 | 0.15 | NOT APPLICABLE | N/A |
| Curb Type | | Curb & Gutter Type | |
| NO CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| DO NOTHING | | EXCELLENT / 97 | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | |
| Poor | (0 - 60) | Fair | (61 - 84) |
| | | Good | (85 - 94) |
| | | Excellent | (95 - 100) |
| | | Not Rated | |
| See Appendix for definitions and formulas | | | |

Note: Parking area was added to the inventory in 2014 and was not collected during the 2012 Cycle 5 collection trip.



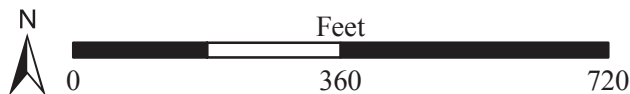
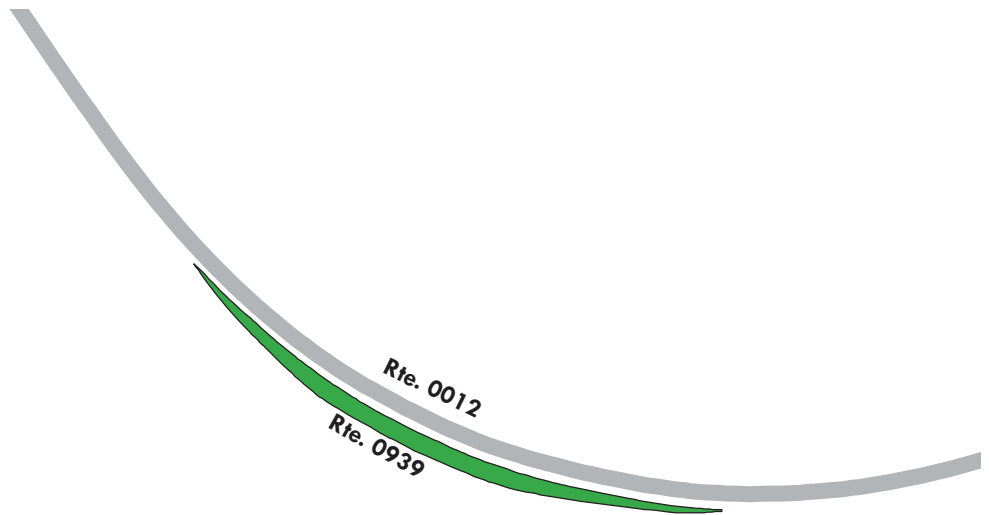
Hawaii Volcanoes National Park

ROUTE 0939: MULAWAI A PELE TRAILHEAD PARKING

Manual Rating

ADJACENT TO ROUTE 0012 (CHAIN OF CRATERS ROAD)

| Inspection Date | FMSS Number | User Access | Surface Type |
|--|-------------------------|------------------------|---------------------|
| 4/20/2014 | 240234 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 13,049 | 0.22 | 5 | LIGHT REPAIR |
| Curb Type | | Curb & Gutter Type | |
| STONE CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| PREVENTIVE MAINTENANCE | | GOOD / 90 | |
| Route Condition Legend – Pavement Condition Rating (PCR) Poor (0 - 60) Fair (61 - 84) Good (85 - 94) Excellent (95 - 100) Not Rated See Appendix for definitions and formulas | | | |



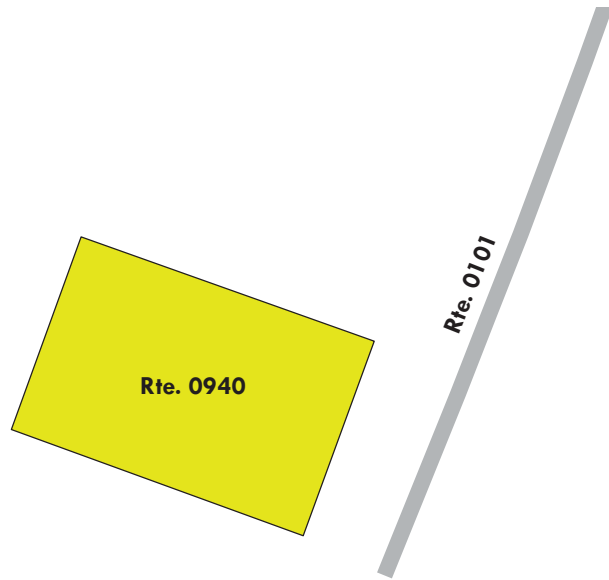
Hawaii Volcanoes National Park

ROUTE 0940: HILINA PALI HANDICAP OVERLOOK PARKING

Manual Rating

ADJACENT TO END OF ROUTE 0101 (HILINA PALI ROAD)

| Inspection Date | FMSS Number | User Access | Surface Type |
|---|--|------------------------|---|
| 4/20/2014 | NOT AVAILABLE | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 454 | 0.01 | NOT APPLICABLE | N/A |
| Curb Type | | Curb & Gutter Type | |
| NO CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| LIGHT 3R TREATMENTS | | FAIR / 73 | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | |
| Poor | (0 - 60) | Fair | (61 - 84) |
| | | Good | (85 - 94) |
| | | Excellent | (95 - 100) |
| | | Not Rated | |
| See Appendix for definitions and formulas | | | |



Hawaii Volcanoes National Park

ROUTE 0941: VOLCANO ART CENTER HANDICAP PARKING

Manual Rating

ADJACENT TO ROUTE 0400 (WATER TANK ROAD)

| Inspection Date | FMSS Number | User Access | Surface Type |
|---|--|------------------------|---|
| 4/9/2014 | 240236 | PUBLIC | ASPHALT |
| Area (Sq. Ft.) | Lane Miles (11' Widths) | Curb Reveal (Inches) | Curb Recommendation |
| 395 | 0.01 | NOT APPLICABLE | N/A |
| Curb Type | | Curb & Gutter Type | |
| NO CURB | | NO CURB AND GUTTER | |
| Culverts | Drop Inlets | Gates | |
| 0 | 0 | 0 | |
| Pavement Recommendation | | Condition Rating / PCR | |
| PREVENTIVE MAINTENANCE | | GOOD / 90 | |
| Route Condition Legend – Pavement Condition Rating (PCR) | | | |
| Poor | (0 - 60) | Fair | (61 - 84) |
| | | Good | (85 - 94) |
| | | Excellent | (95 - 100) |
| | | Not Rated | |
| See Appendix for definitions and formulas | | | |



SECTION 7B

PARKING AREA CONDITION RATING SHEETS

FROM

JANUARY 2012

Hawaii Volcanoes National Park

Route 0900ZZ Summary Record

KILAUEA VISITORS CENTER PARKING AREAS

FROM ROUTE 0013 (OFFICE AREA STREET) AT MP 0.01 (ON RIGHT AND LEFT)
TO ROUTE 0400 (WATER TANK ROAD) AT MP 0.01 ON RIGHT

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------------|----------------|
| 0900ZZ | PUBLIC | 1/18/2012 | 56228 | 0.968 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 5 | 0 | NO | CONCRETE/ STONE | N/A SUMMARY |

* Lane miles are based on 11' lane widths



Hawaii Volcanoes National Park

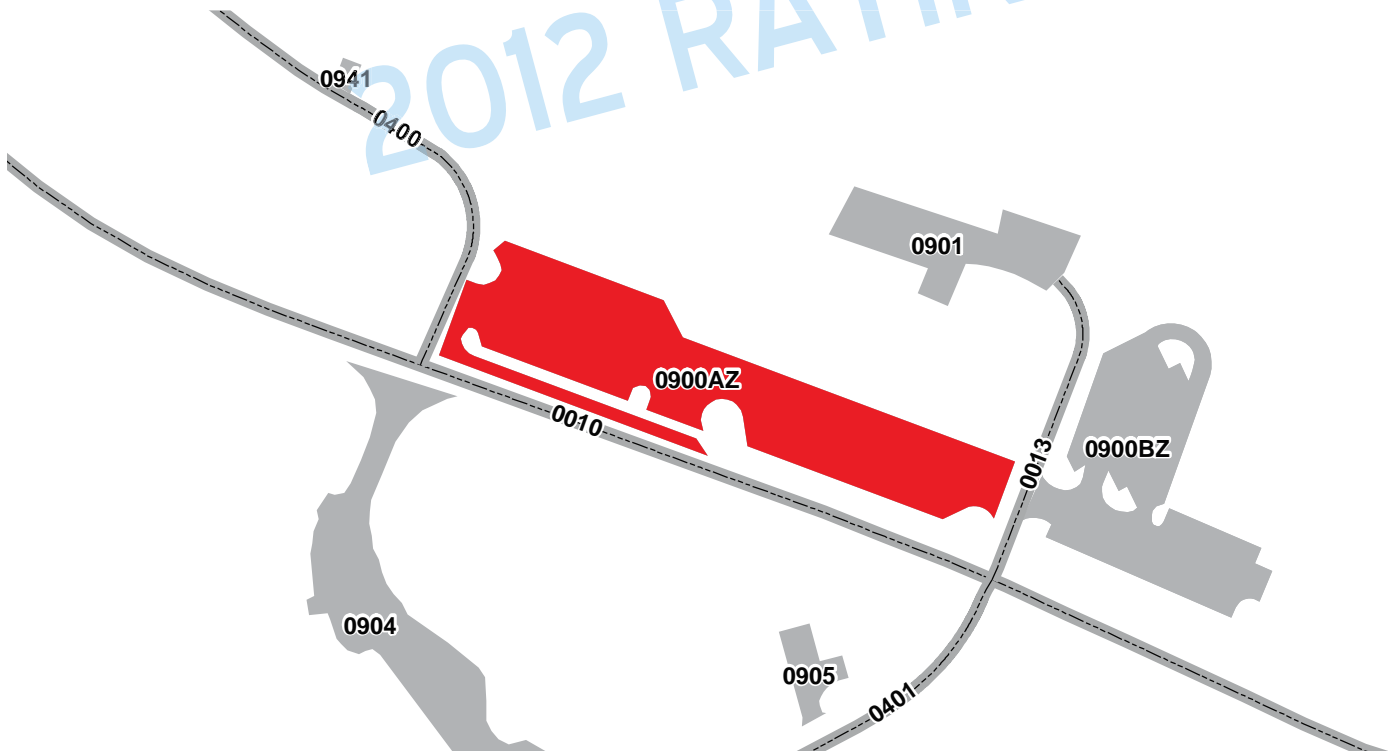
Route 0900AZ Subcomponent Record

KILAUEA VISITORS CENTER PARKING AREA A

FROM ROUTE 0013 (OFFICE AREA STREET) AT MP 0.01 ON LEFT
TO ROUTE 0400 (WATER TANK ROAD) AT MP 0.01 ON RIGHT

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|------------------|
| 0900AZ | PUBLIC | 1/18/2012 | 35044 | 0.603 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 4 | 0 | NO | STONE | N/A CONSTRUCT |

* Lane miles are based on 11' lane widths



Hawaii Volcanoes National Park

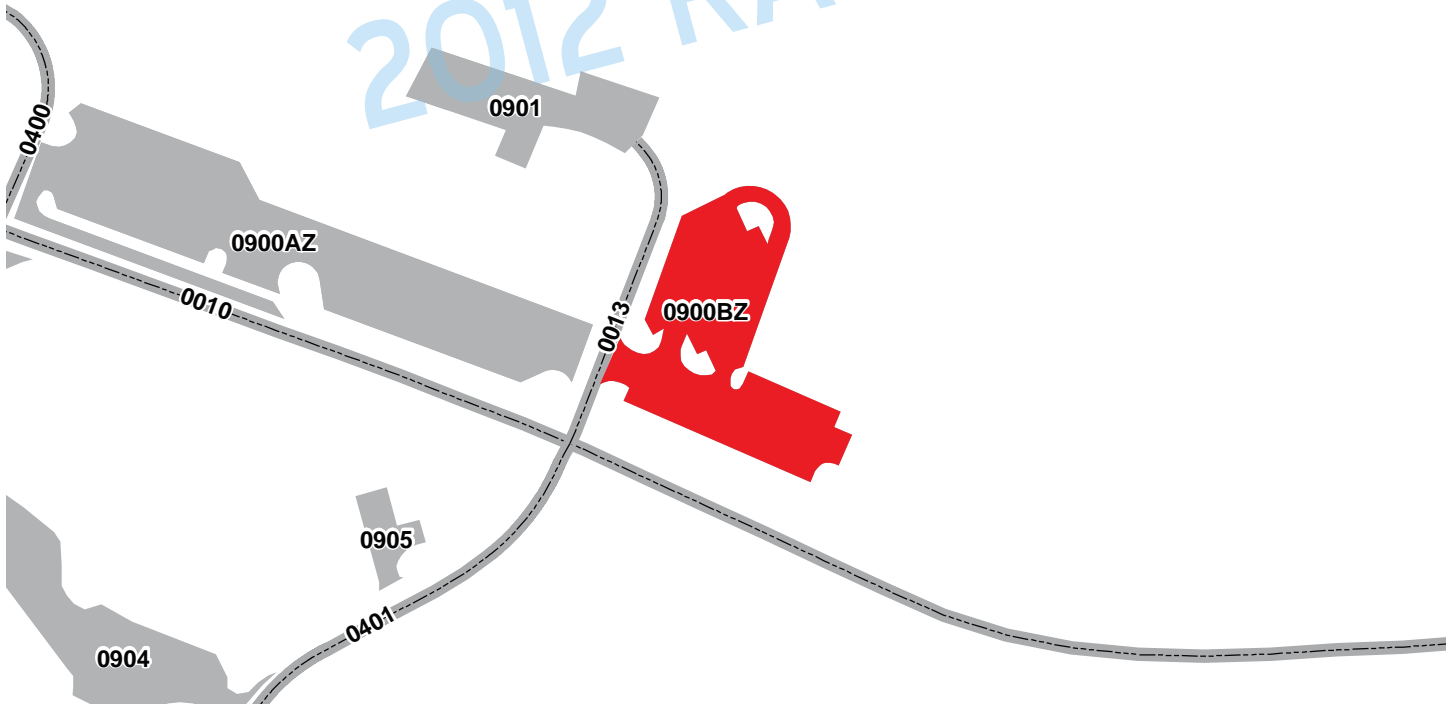
Route 0900BZ Subcomponent Record

KILAUEA VISITORS CENTER PARKING AREA B

FROM ROUTE 0013 (OFFICE AREA STREET) AT MP 0.01 ON RIGHT
TO PARKING

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------------|--------------|
| 0900BZ | PUBLIC | 1/18/2012 | 21184 | 0.365 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 1 | 0 | NO | CONCRETE/ STONE | 73 FAIR |

* Lane miles are based on 11' lane widths



Hawaii Volcanoes National Park Route 0901 KILAUEA VISITORS CENTER ADMINISTRATIVE PARKING

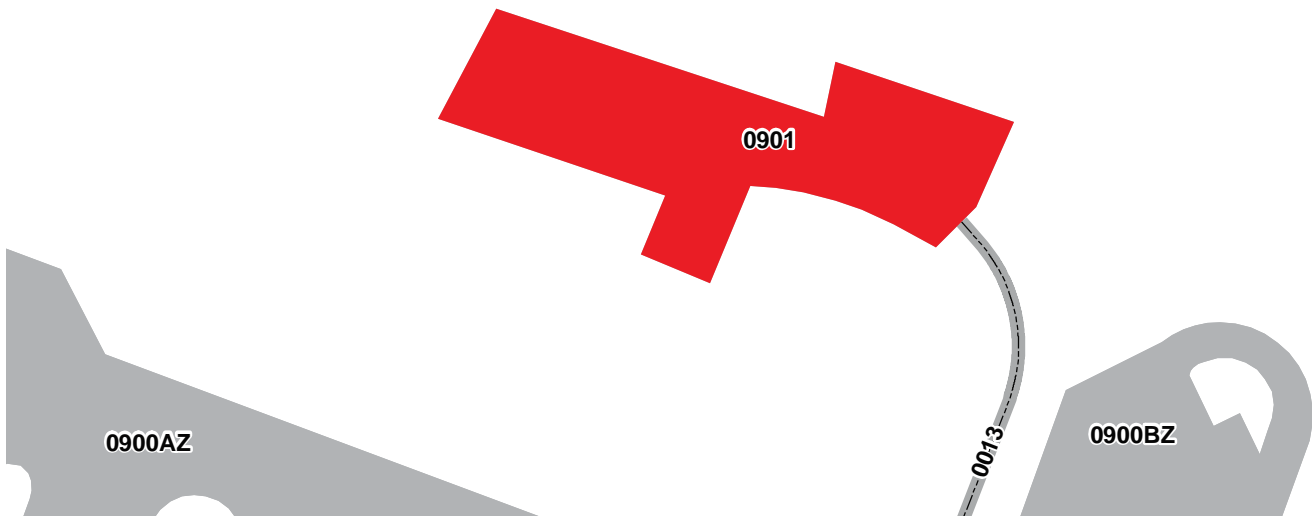
FROM END OF ROUTE 0013 (OFFICE AREA STREET)
TO PARKING

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0901 | NONPUBLIC | 1/18/2012 | 8834 | 0.152 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | STONE | 45 POOR |

* Lane miles are based on 11' lane widths



2012 RATING



Hawaii Volcanoes National Park

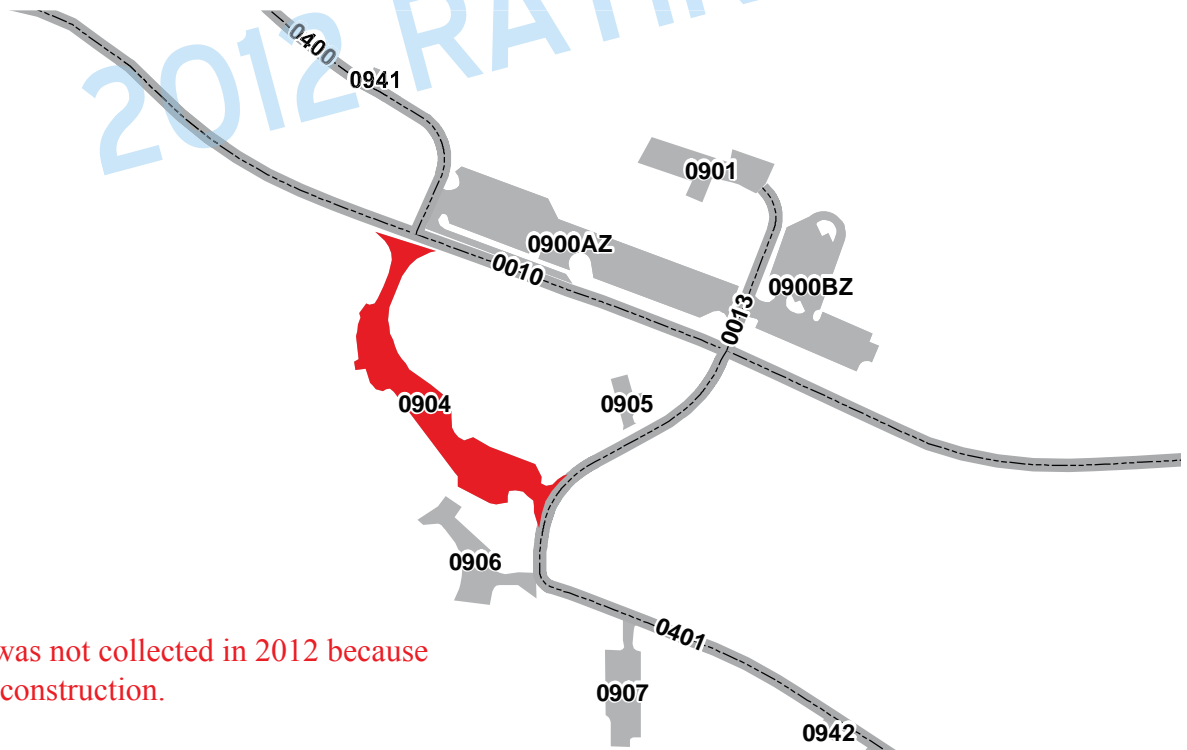
Route 0904

VOLCANO HOUSE PARKING

FROM ROUTE 0010 (CRATER RIM DRIVE) AT MP 0.35 ON LEFT
TO ROUTE 0401 (RESIDENCE ROAD) AT MP 0.06 ON RIGHT

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|------------------|
| 0904 | PUBLIC | 1/18/2012 | 25868 | 0.445 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| N/A | N/A | N/A | N/A | N/A | N/A CONSTRUCT |

* Lane miles are based on 11' lane widths



Route 0904 was not collected in 2012 because it was under construction.



Hawaii Volcanoes National Park

Route 0905

OHIA WING PARKING

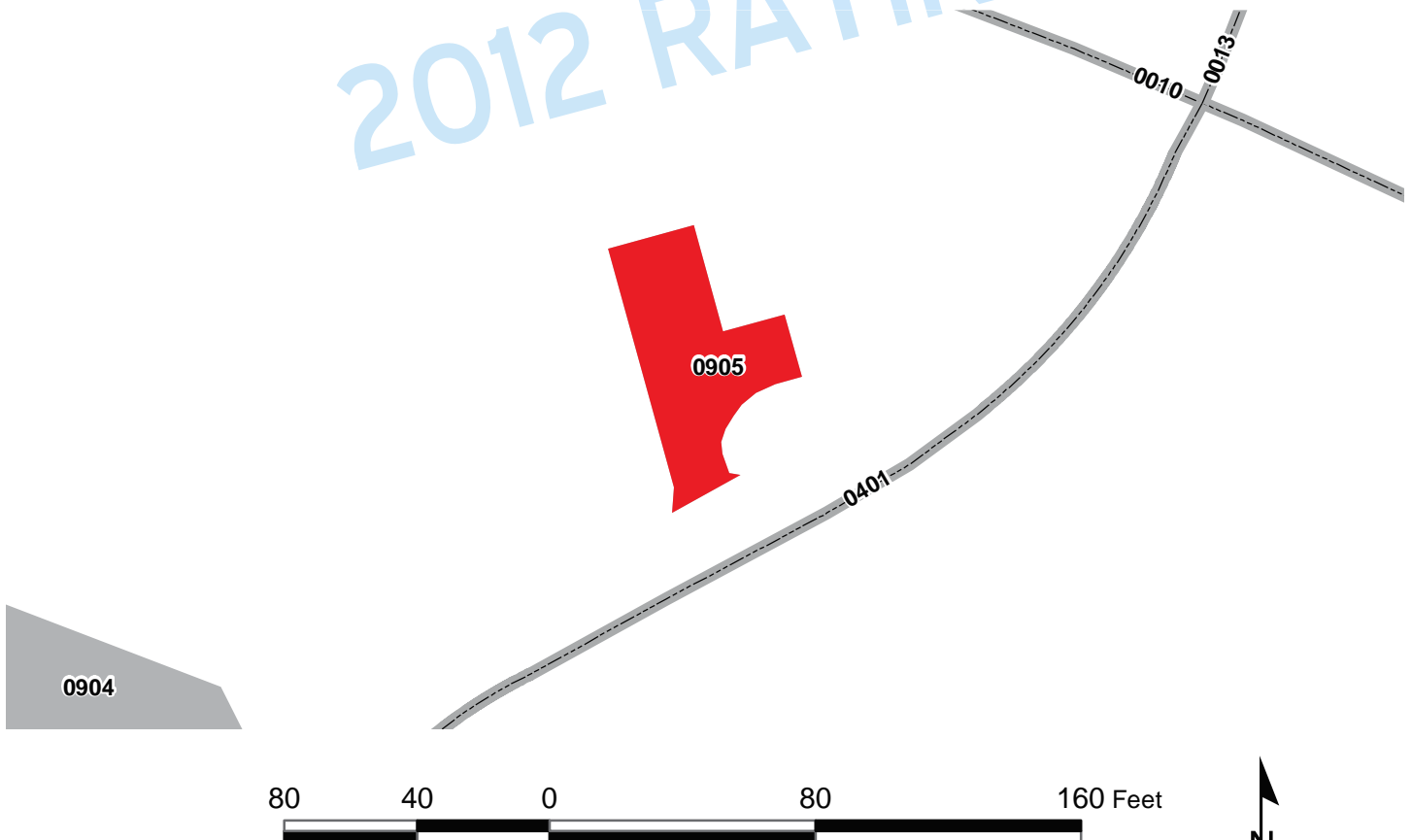
FROM ROUTE 0401 (RESIDENCE ROAD) AT MP 0.037 ON RIGHT
TO PARKING

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0905 | NONPUBLIC | 1/18/2012 | 2196 | 0.038 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 1 | 1 | NO | STONE | 45 POOR |

* Lane miles are based on 11' lane widths



2012 RATING



Hawaii Volcanoes National Park

Route 0906

VOLCANO HOUSE HOTEL SERVICE AREA BLDG #B167

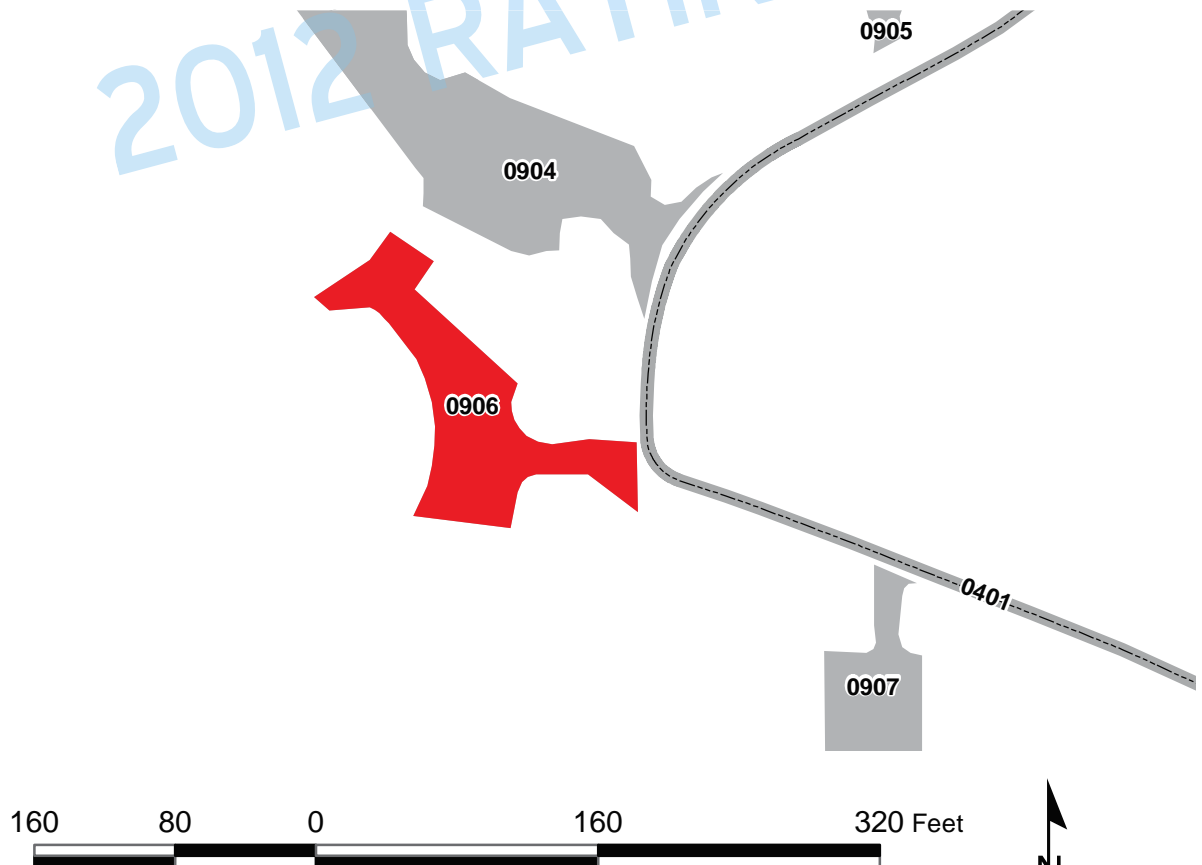
FROM ROUTE 0401 (RESIDENCE ROAD) AT MP 0.089 ON RIGHT
TO PARKING

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0906 | NONPUBLIC | 1/18/2012 | 8391 | 0.144 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | NO | 45 POOR |

* Lane miles are based on 11' lane widths



2012 RATING



Hawaii Volcanoes National Park

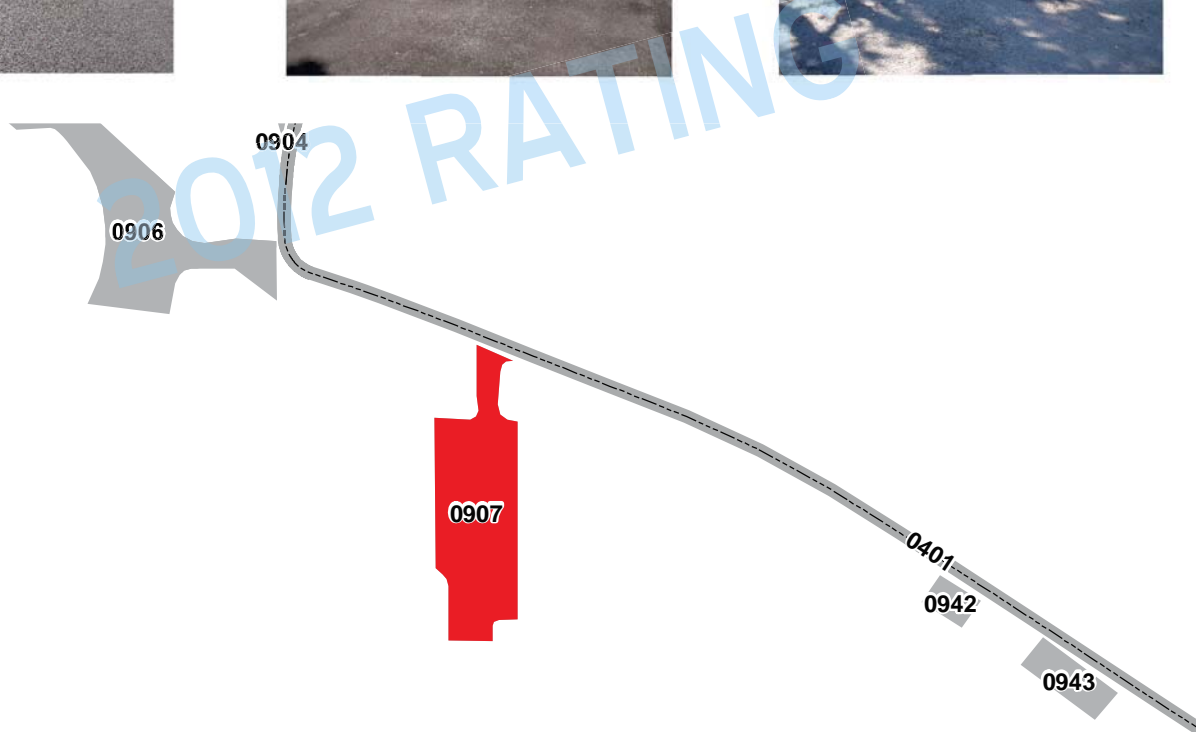
Route 0907

BUILDING #2 PARKING

FROM ROUTE 0401 (RESIDENCE ROAD) AT MP 0.112 ON RIGHT
TO PARKING

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0907 | NONPUBLIC | 1/18/2012 | 7844 | 0.135 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | NO | 45 POOR |

* Lane miles are based on 11' lane widths



Hawaii Volcanoes National Park

Route 0908ZZ Summary Record

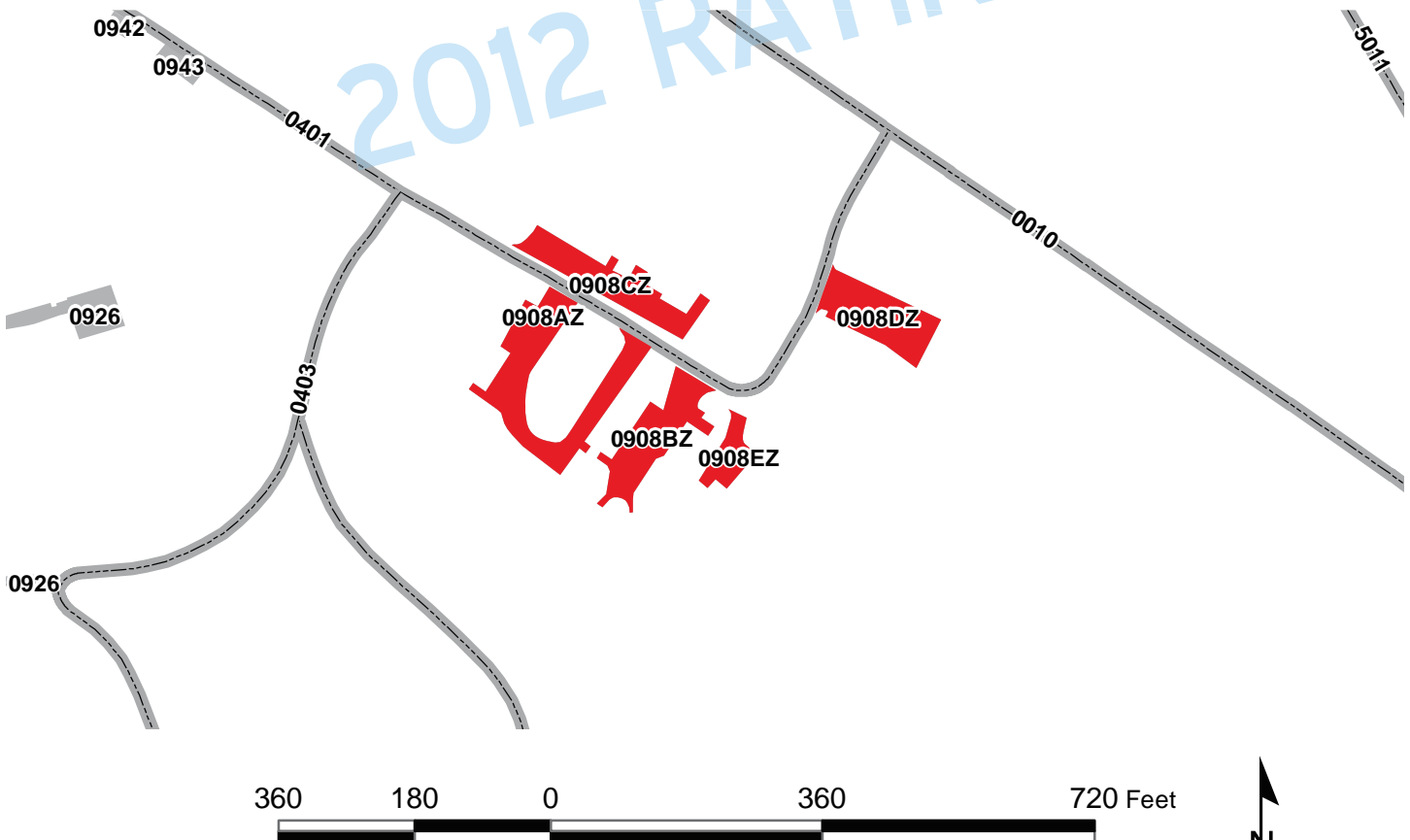
KILAUEA MAINTENANCE YARD PARKING AREAS

FROM ROUTE 0401 (RESIDENCE ROAD) ON LEFT AND RIGHT
TO PARKING

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|---------------|
| 0908ZZ | NONPUBLIC | 1/18/2012 | 46768 | 0.806 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 2 | 3 | 0 | NO | STONE | 72 SUMMARY |

* Lane miles are based on 11' lane widths

Subcomponent 0908DZ was split from Route 0908ZZ in 2014 and is Route 0908D in the latest inventory shown in Section 7A. Also, Routes 0942 and 0943 from 2012 were combined into 0908ZZ and changed to 0908FZ and 0908GZ, respectively. Thus, the summary totals shown on this 2012 Interim Report page are no longer up to date. Refer to Section 7A for updated quantities.



Hawaii Volcanoes National Park

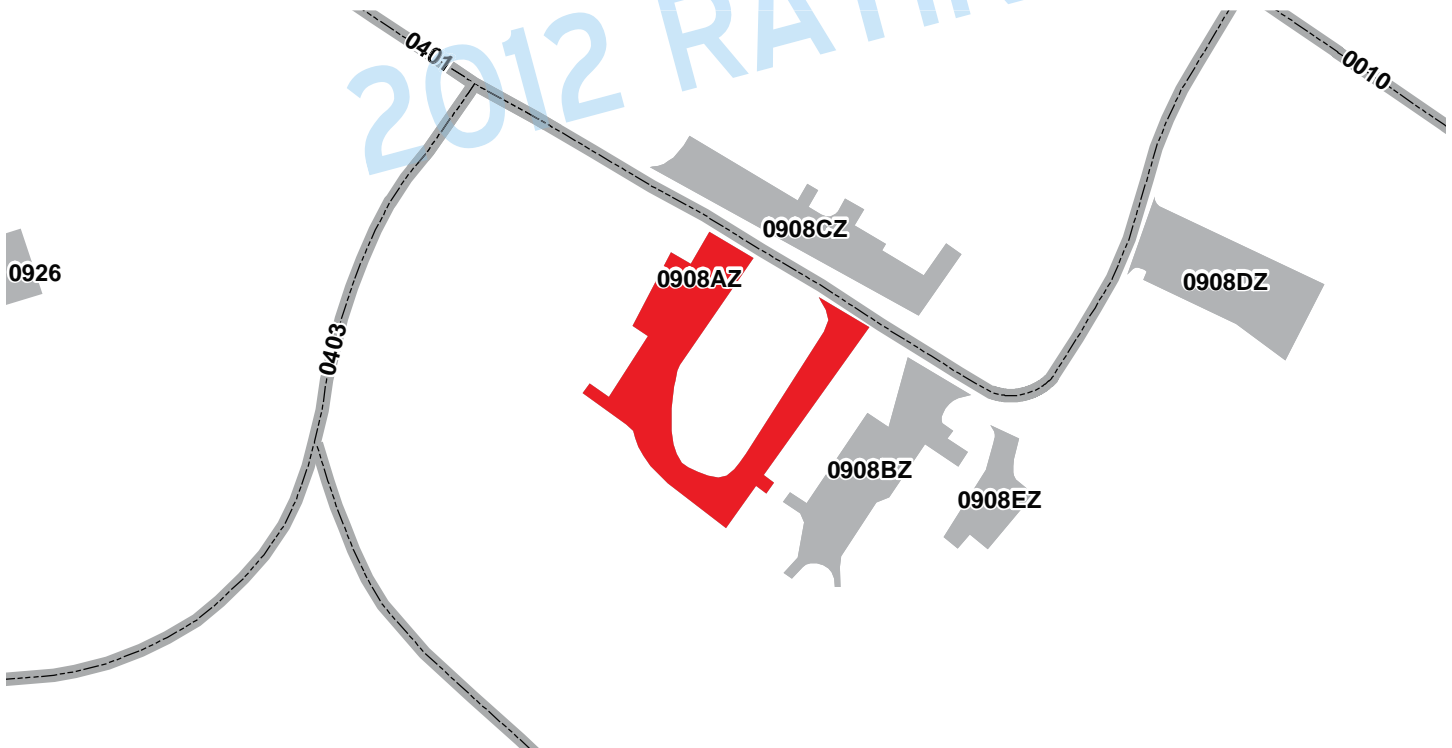
Route 0908AZ Subcomponent Record

KILAUEA MAINTENANCE YARD PARKING A

FROM ROUTE 0401 (RESIDENCE ROAD) AT MP 0.303 ON RIGHT
TO ROUTE 0401 (RESIDENCE ROAD) AT MP 0.324 ON RIGHT

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0908AZ | NONPUBLIC | 1/18/2012 | 15381 | 0.265 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 1 | 1 | 0 | NO | NO | 73 FAIR |

* Lane miles are based on 11' lane widths



Hawaii Volcanoes National Park

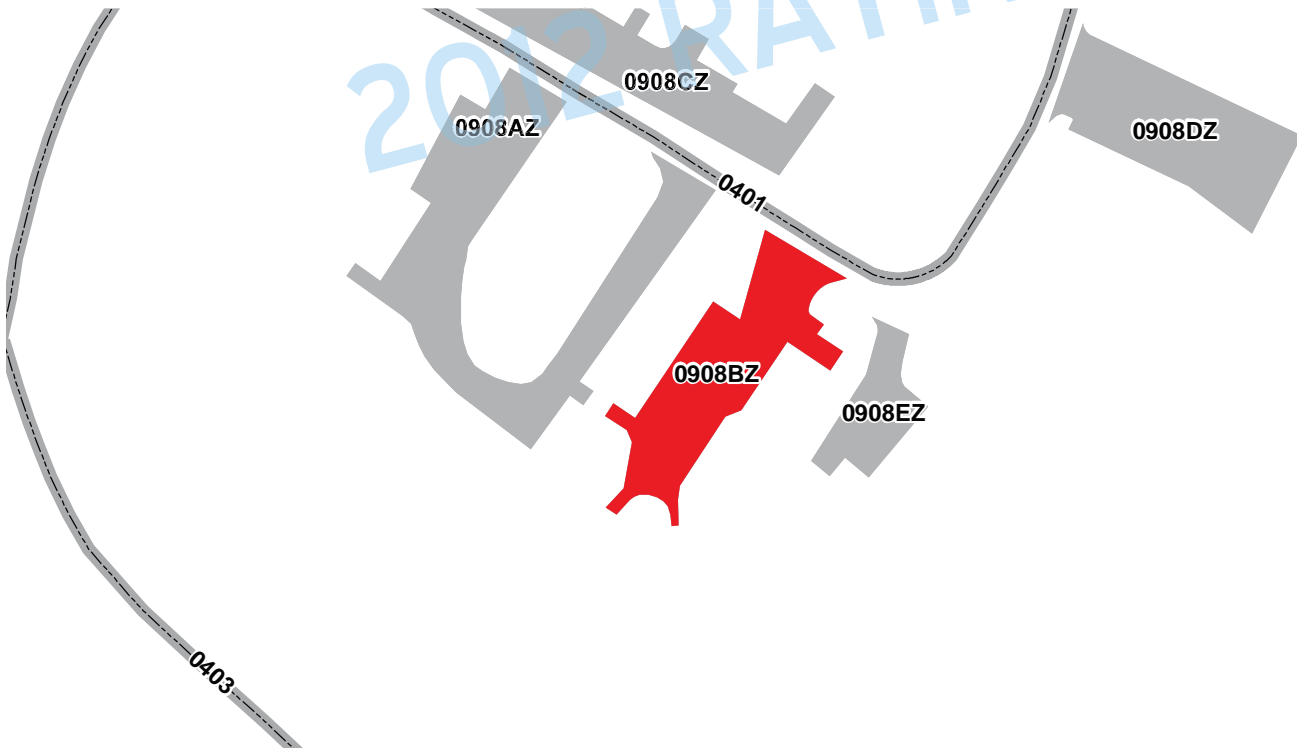
Route 0908BZ Subcomponent Record

KILAUEA MAINTENANCE YARD PARKING B

FROM ROUTE 0401 (RESIDENCE ROAD) AT MP 0.341 ON RIGHT
TO PARKING

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0908BZ | NONPUBLIC | 1/18/2012 | 9439 | 0.163 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 1 | 0 | 0 | NO | NO | 45 POOR |

* Lane miles are based on 11' lane widths



Hawaii Volcanoes National Park

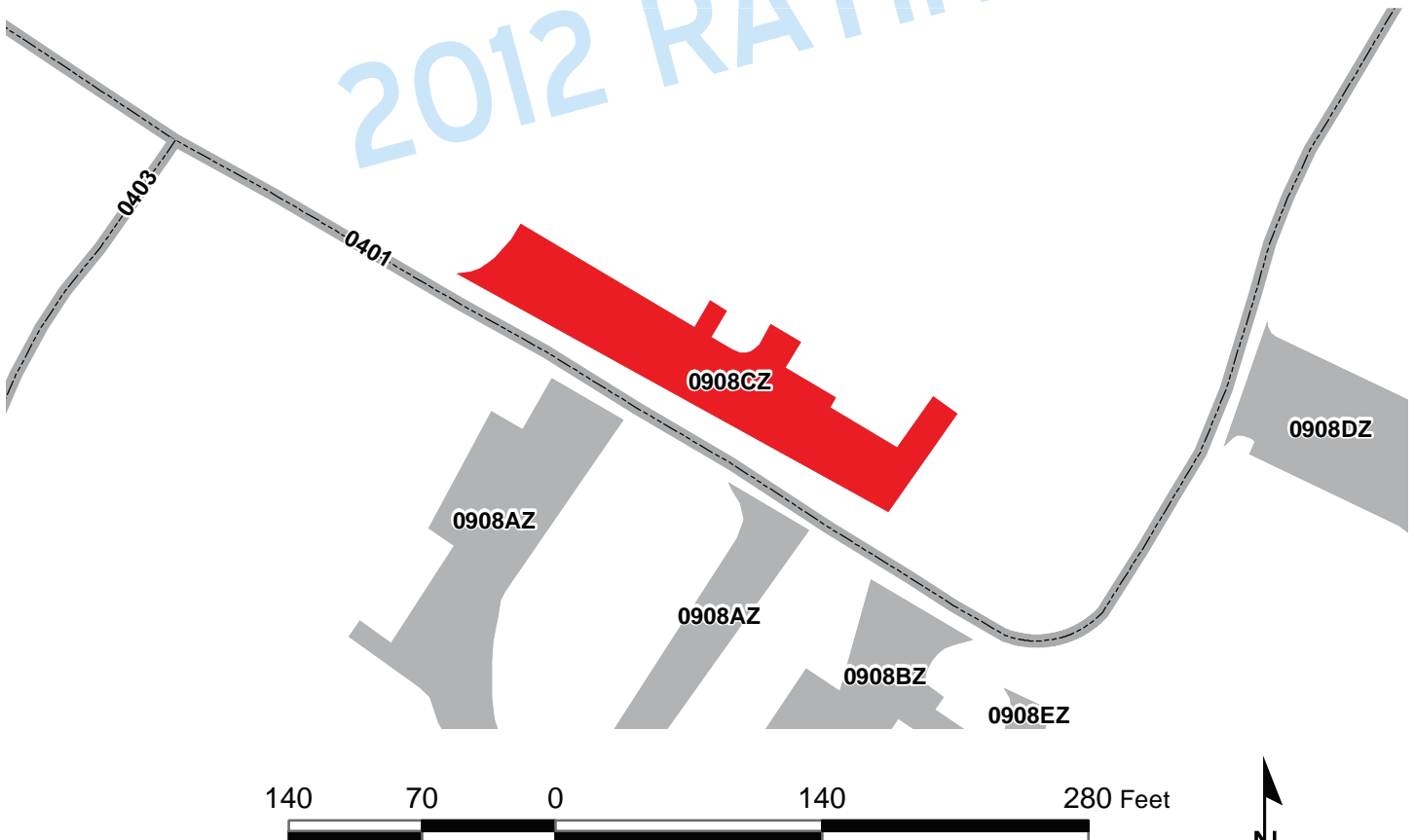
Route 0908CZ Subcomponent Record

KILAUEA MAINTENANCE YARD PARKING C

ADJACENT TO ROUTE 0401 (RESIDENCE ROAD) AT MP 0.311 ON LEFT

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0908CZ | NONPUBLIC | 1/18/2012 | 9465 | 0.163 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | STONE | 73 FAIR |

* Lane miles are based on 11' lane widths



Hawaii Volcanoes National Park Route 0908DZ Subcomponent Record HAZARDOUS STORAGE PARKING

FROM ROUTE 0401 (RESIDENCE ROAD) AT MP 0.386 ON RIGHT
TO PARKING

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0908DZ | NONPUBLIC | 1/18/2012 | 9258 | 0.159 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | NO | 90 GOOD |

* Lane miles are based on 11' lane widths



Subcomponent 0908DZ was split from Route 0908ZZ in 2014. In Section 7A it is reported separately as Route 0908D.



Hawaii Volcanoes National Park

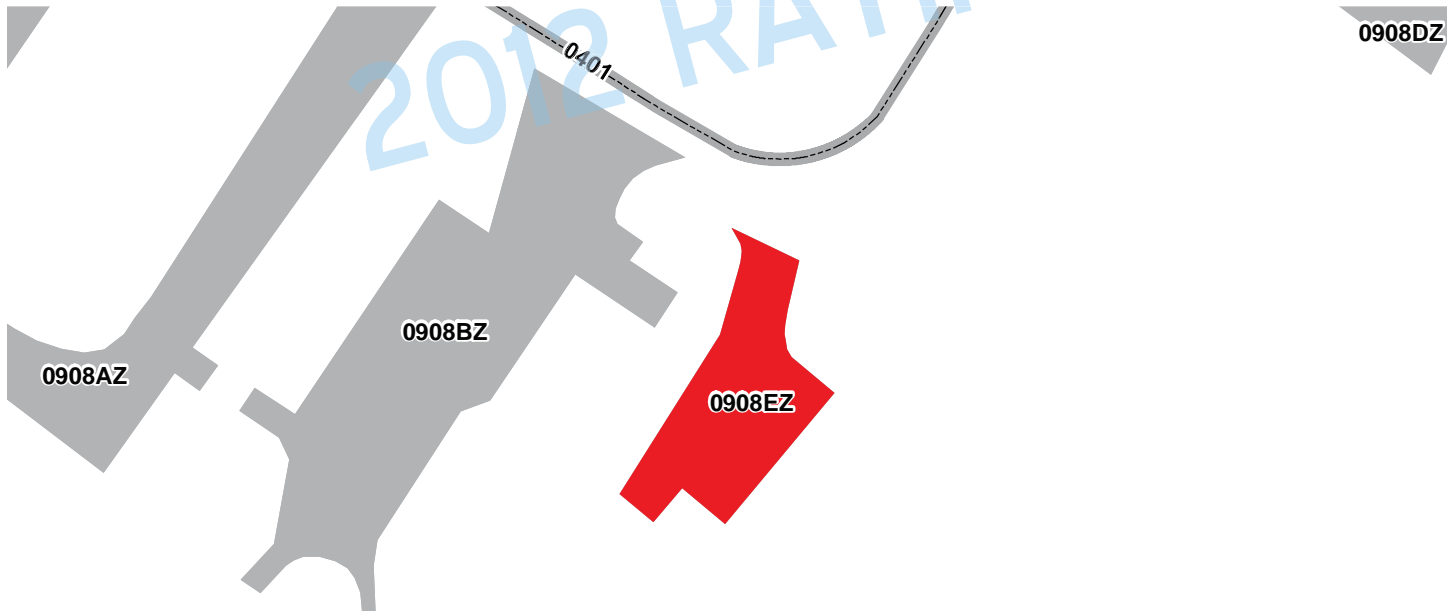
Route 0908EZ Subcomponent Record

KILAUEA MAINTENANCE YARD PARKING E

FROM ROUTE 0401 (RESIDENCE ROAD) AT MP 0.354 ON RIGHT
TO PARKING

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|-----------------|
| 0908EZ | NONPUBLIC | 1/18/2012 | 3225 | 0.056 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 2 | 0 | NO | NO | 97 EXCELLENT |

* Lane miles are based on 11' lane widths



Hawaii Volcanoes National Park

~~Route 0942~~

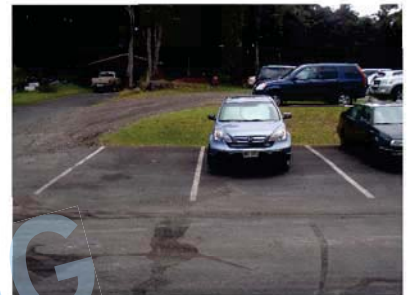
RESIDENCE ROAD PARKING A

NOW ROUTE 0908FZ

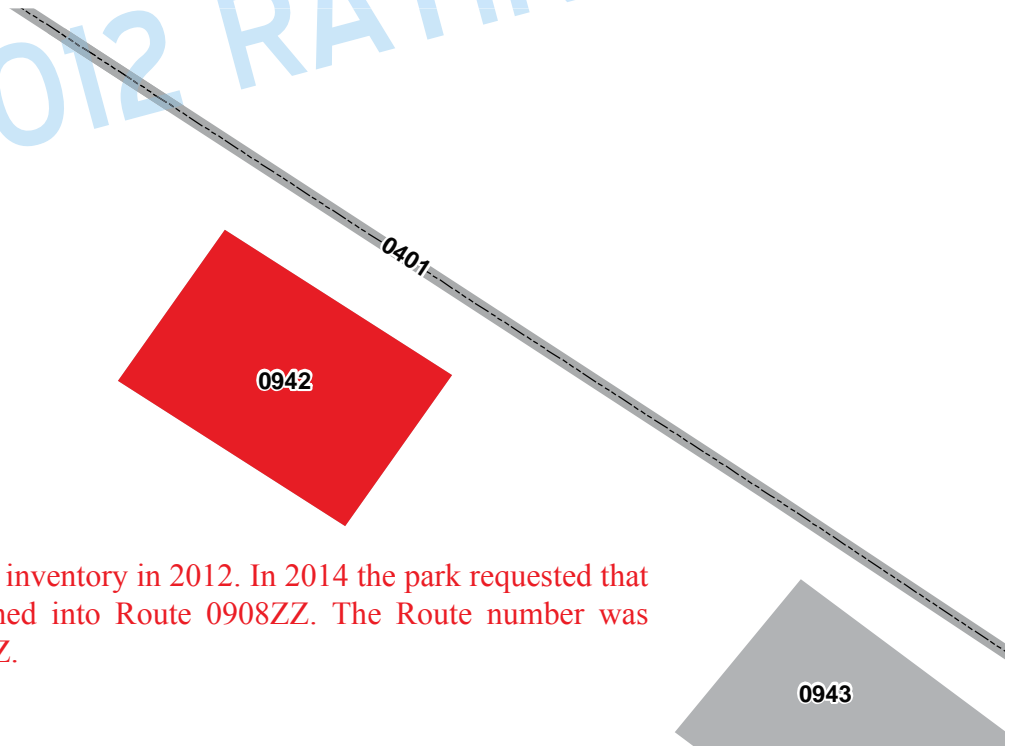
ADJACENT TO ROUTE 0401 (RESIDENCE ROAD) AT MP ON 0.180 ON LEFT

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0942 | PUBLIC | 1/18/2012 | 673 | 0.012 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | NO | 90 GOOD |

* Lane miles are based on 11' lane widths



2012 RATING



Route 0942 was added to the inventory in 2012. In 2014 the park requested that this parking area be combined into Route 0908ZZ. The Route number was updated from 0942 to 0908FZ.



Hawaii Volcanoes National Park

~~Route 0943~~

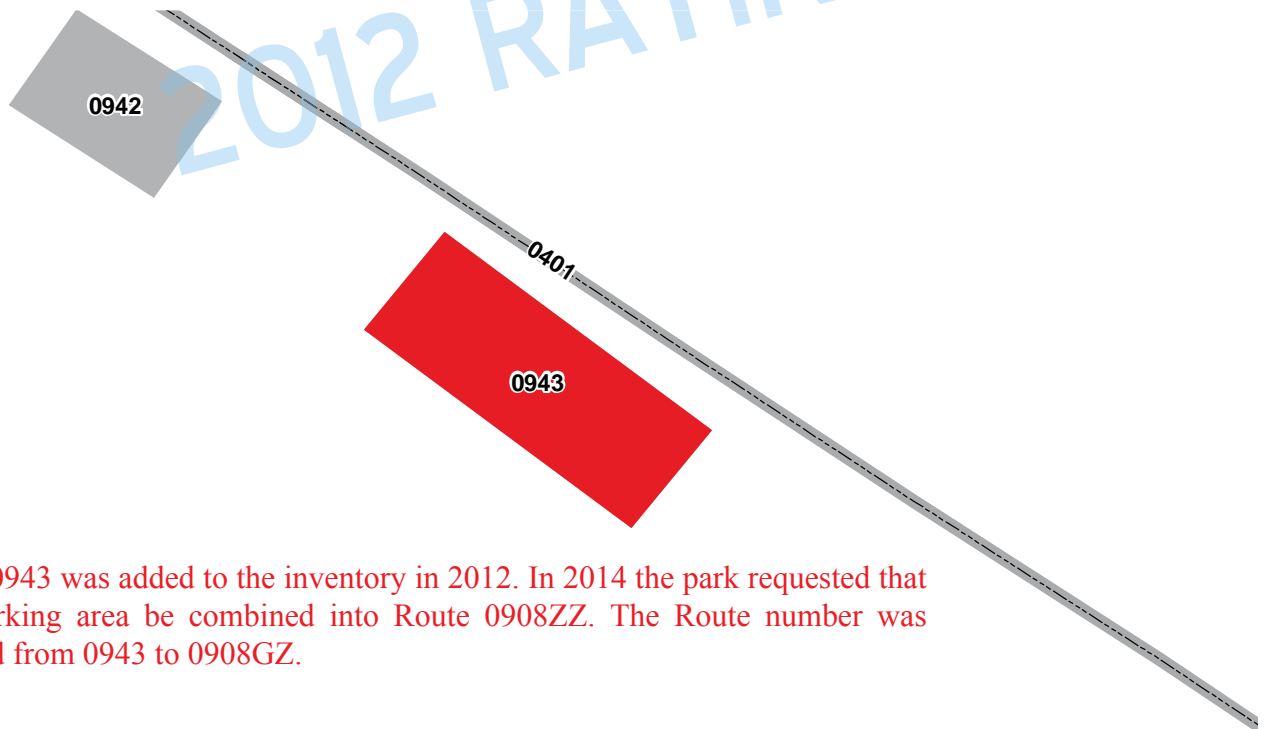
RESIDENCE ROAD PARKING B

NOW ROUTE 0908GZ

ADJACENT TO ROUTE 0401 (RESIDENCE ROAD) AT MP 0.196 ON LEFT

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0943 | PUBLIC | 1/18/2012 | 1390 | 0.024 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | NO | 90 GOOD |

* Lane miles are based on 11' lane widths



Route 0943 was added to the inventory in 2012. In 2014 the park requested that this parking area be combined into Route 0908ZZ. The Route number was updated from 0943 to 0908GZ.

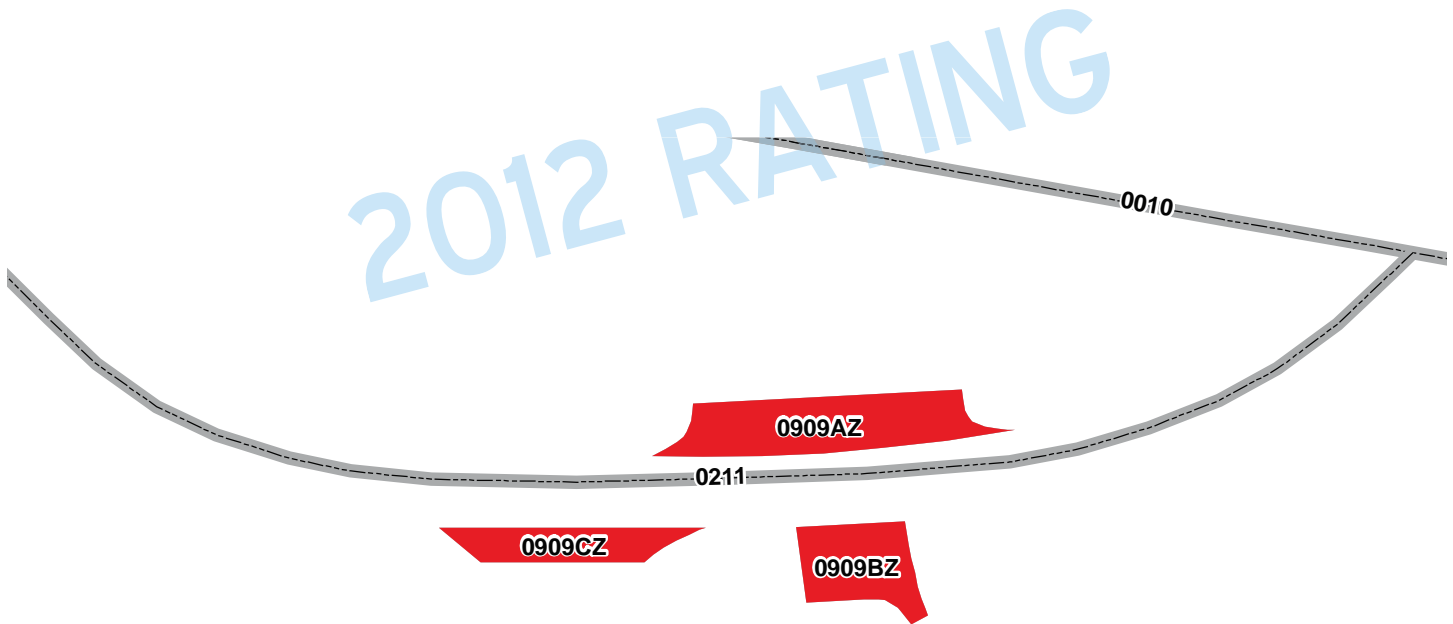


Hawaii Volcanoes National Park Route 0909ZZ Summary Record STEAM VENTS PARKING AREAS

ADJACENT TO ROUTE 0211 (STEAM VENTS ROAD) ON RIGHT AND LEFT

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0909ZZ | PUBLIC | 1/18/2012 | 4411 | 0.075 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | NO | 81 SUMMARY |

* Lane miles are based on 11' lane widths



Hawaii Volcanoes National Park

Route 0909AZ Subcomponent Record

STEAM VENTS PARKING A

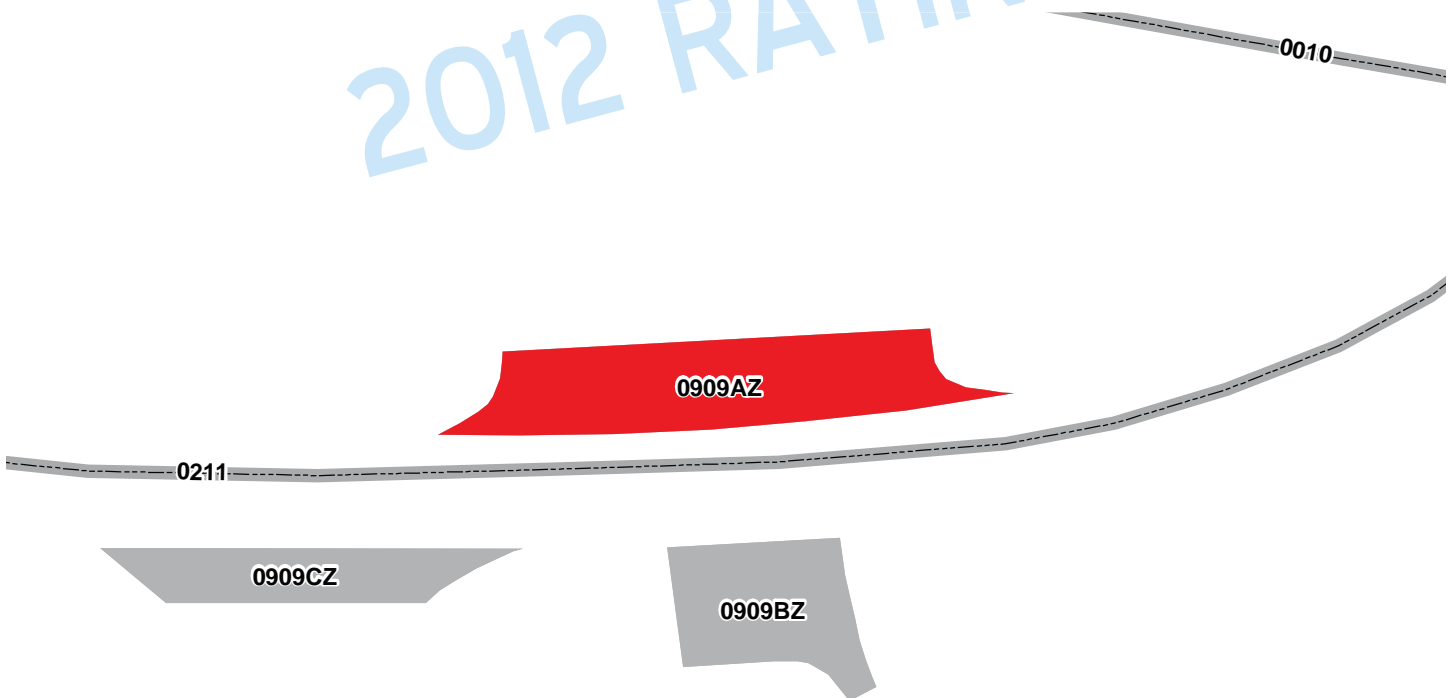
ADJACENT TO ROUTE 0211 (STEAM VENTS ROAD) AT MP 0.04 ON RIGHT

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0909AZ | PUBLIC | 1/18/2012 | 2164 | 0.037 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | NO | 90 GOOD |

* Lane miles are based on 11' lane widths



2012 RATING



Hawaii Volcanoes National Park

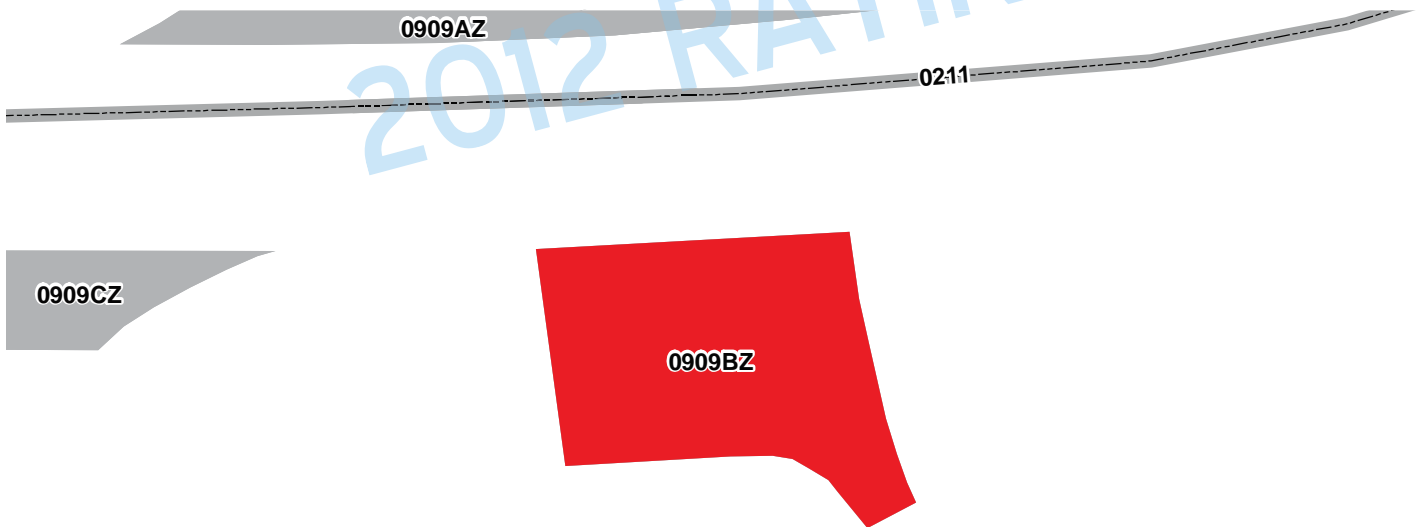
Route 0909BZ Subcomponent Record

STEAM VENTS HANDICAP PARKING

ADJACENT TO ROUTE 0211 (STEAM VENTS ROAD) AT MP 0.04 ON LEFT

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0909BZ | PUBLIC | 1/18/2012 | 1246 | 0.021 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | NO | 73 FAIR |

* Lane miles are based on 11' lane widths



Hawaii Volcanoes National Park Route 0909CZ Subcomponent Record STEAM VENTS BUS PARKING

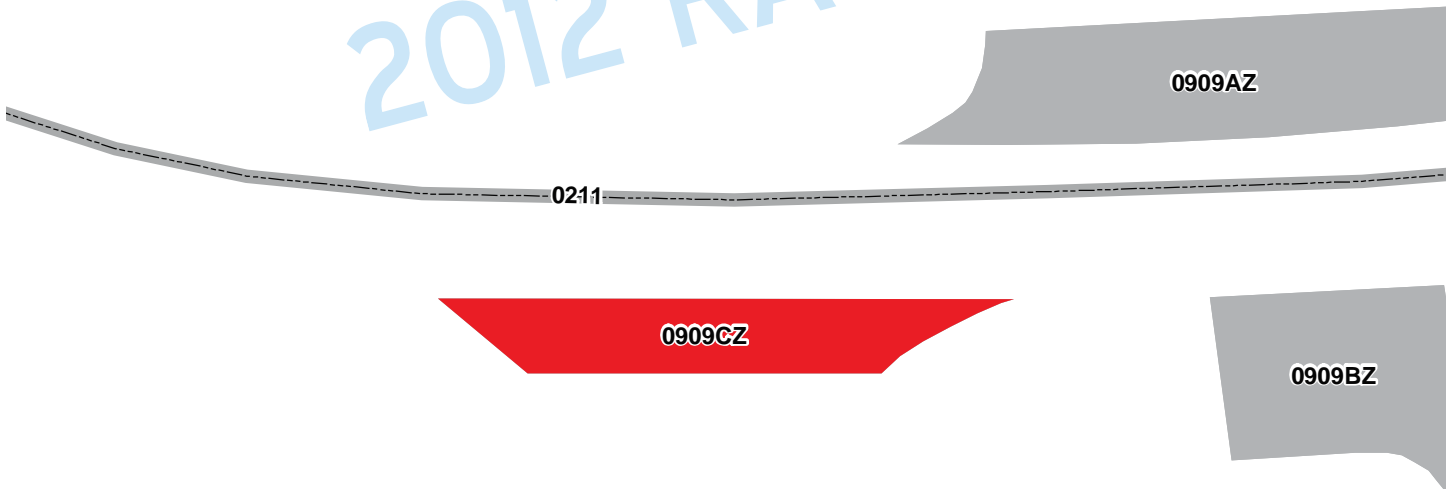
ADJACENT TO ROUTE 0211 (STEAM VENTS ROAD) AT MP 0.05 ON LEFT

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0909CZ | PUBLIC | 1/18/2012 | 1001 | 0.017 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | NO | 73 FAIR |

* Lane miles are based on 11' lane widths



2012 RATING

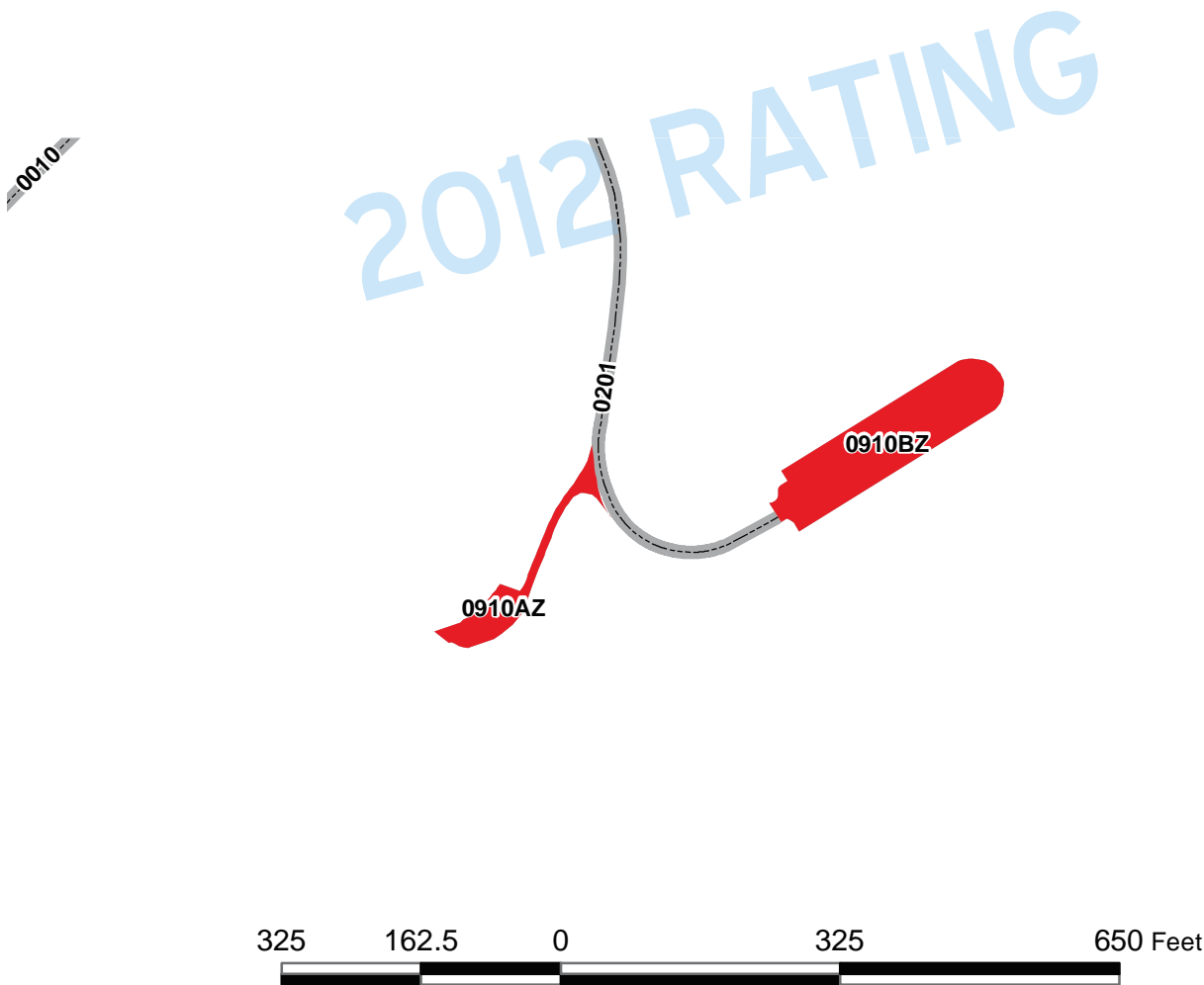


Hawaii Volcanoes National Park Route 0910ZZ Summary Record KILAUEA OVERLOOK AND PICNIC AREA PARKING AREAS

FROM ROUTE 0201 (KILAUEA OVERLOOK ROAD)
TO PARKING

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|---------------|
| 0910ZZ | PUBLIC | 1/18/2012 | 24617 | 0.424 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | STONE | 73 SUMMARY |

* Lane miles are based on 11' lane widths



Hawaii Volcanoes National Park Route 0910AZ Subcomponent Record KILAUEA PICNIC AREA PARKING

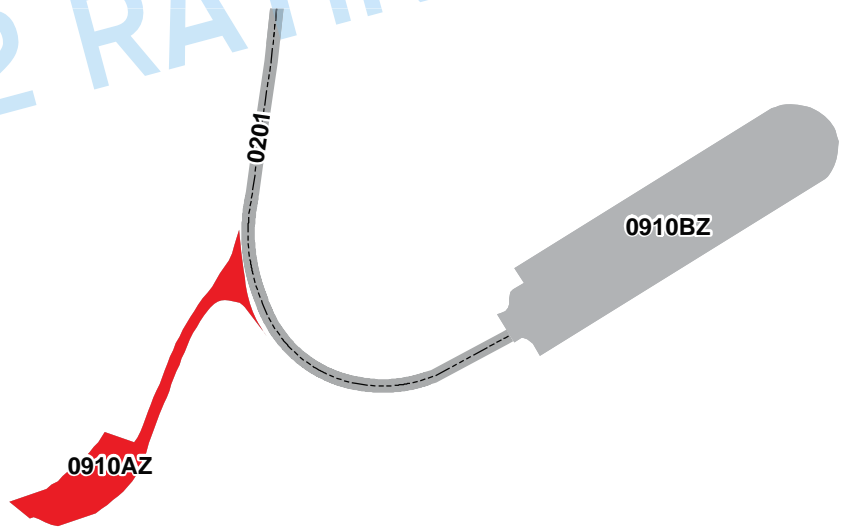
FROM ROUTE 0201 (KILAUEA OVERLOOK ROAD) AT MP 0.15 ON RIGHT
TO PARKING

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0910AZ | PUBLIC | 1/18/2012 | 5550 | 0.096 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | NO | 73 FAIR |

* Lane miles are based on 11' lane widths



2012 RATING



Hawaii Volcanoes National Park Route 0910BZ Subcomponent Record KILAUEA OVERLOOK PARKING

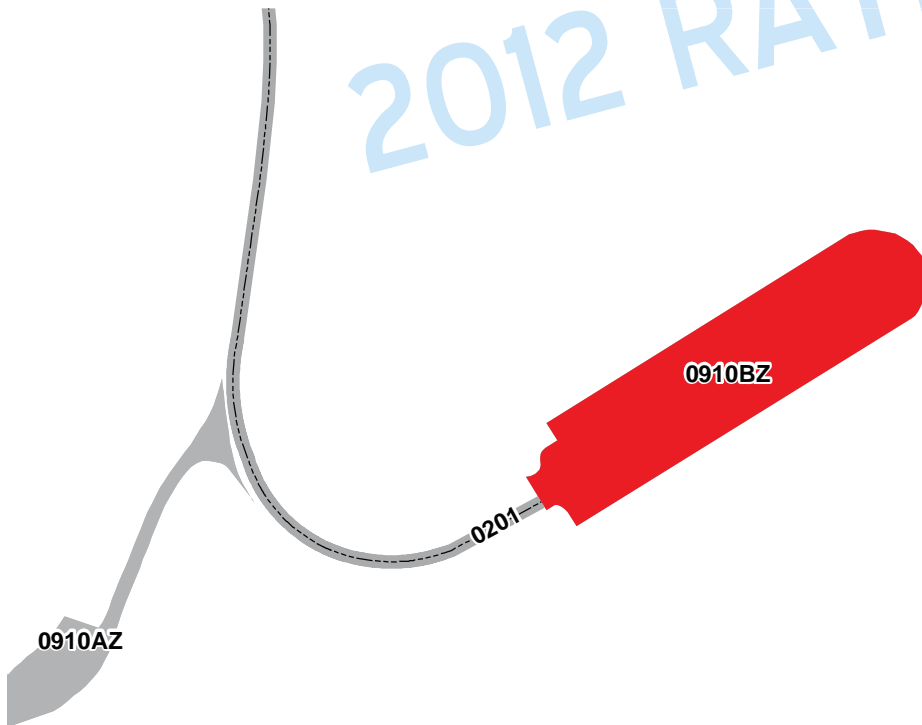
FROM END OF ROUTE 0201 (KILAUEA OVERLOOK ROAD)
TO PARKING

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0910BZ | PUBLIC | 1/18/2012 | 19067 | 0.328 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | STONE | 73 FAIR |

* Lane miles are based on 11' lane widths



2012 RATING



Hawaii Volcanoes National Park

Route 0911

VOLCANO OBSERVATORY PARKING

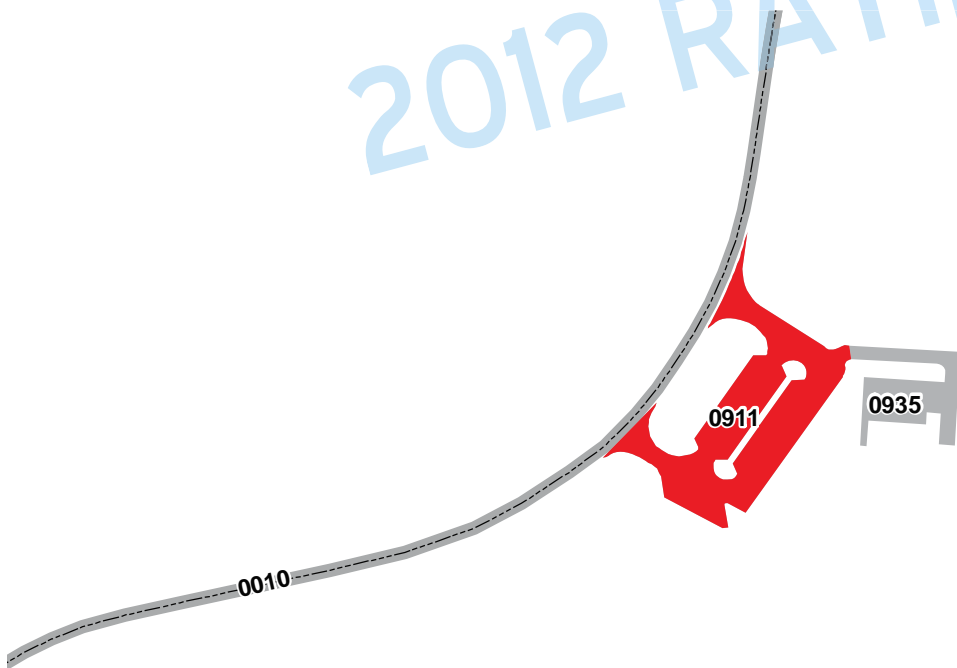
FROM ROUTE 0010 (CRATER RIM DRIVE) AT MP 2.78 ON LEFT
TO ROUTE 0010 (CRATER RIM DRIVE) AT MP 2.83 ON LEFT

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|-----------------|
| 0911 | PUBLIC | 1/18/2012 | 47247 | 0.813 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 1 | 0 | 0 | NO | STONE | 97 EXCELLENT |

* Lane miles are based on 11' lane widths



2012 RATING



Hawaii Volcanoes National Park
Route 0912
HALEMAUMAU OVERLOOK PARKING

Route 0912 could not be collected for GPS, condition, and features in Cycle 5 because the parking area was inaccessible due to hazardous volcanic gas conditions.

2012 RATING

Hawaii Volcanoes National Park

Route 0913

DEVASTATION TRAIL PARKING

FROM ROUTE 0010 (CRATER RIM DRIVE) AT MP 7.56 ON LEFT
TO PARKING

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0913 | PUBLIC | 1/17/2012 | 23305 | 0.401 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | STONE | 45 POOR |

* Lane miles are based on 11' lane widths



2012 RATING



Hawaii Volcanoes National Park

Route 0914

PUU PUA I PARKING

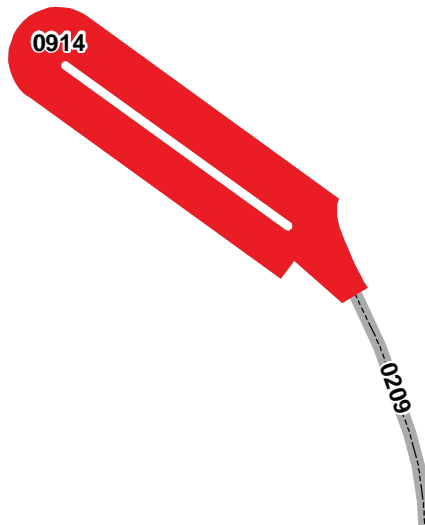
FROM END OF ROUTE 0209 (PUU PUA I OVERLOOK ROAD)
TO PARKING

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0914 | PUBLIC | 1/17/2012 | 21336 | 0.367 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | STONE | 90 GOOD |

* Lane miles are based on 11' lane widths



2012 RATING

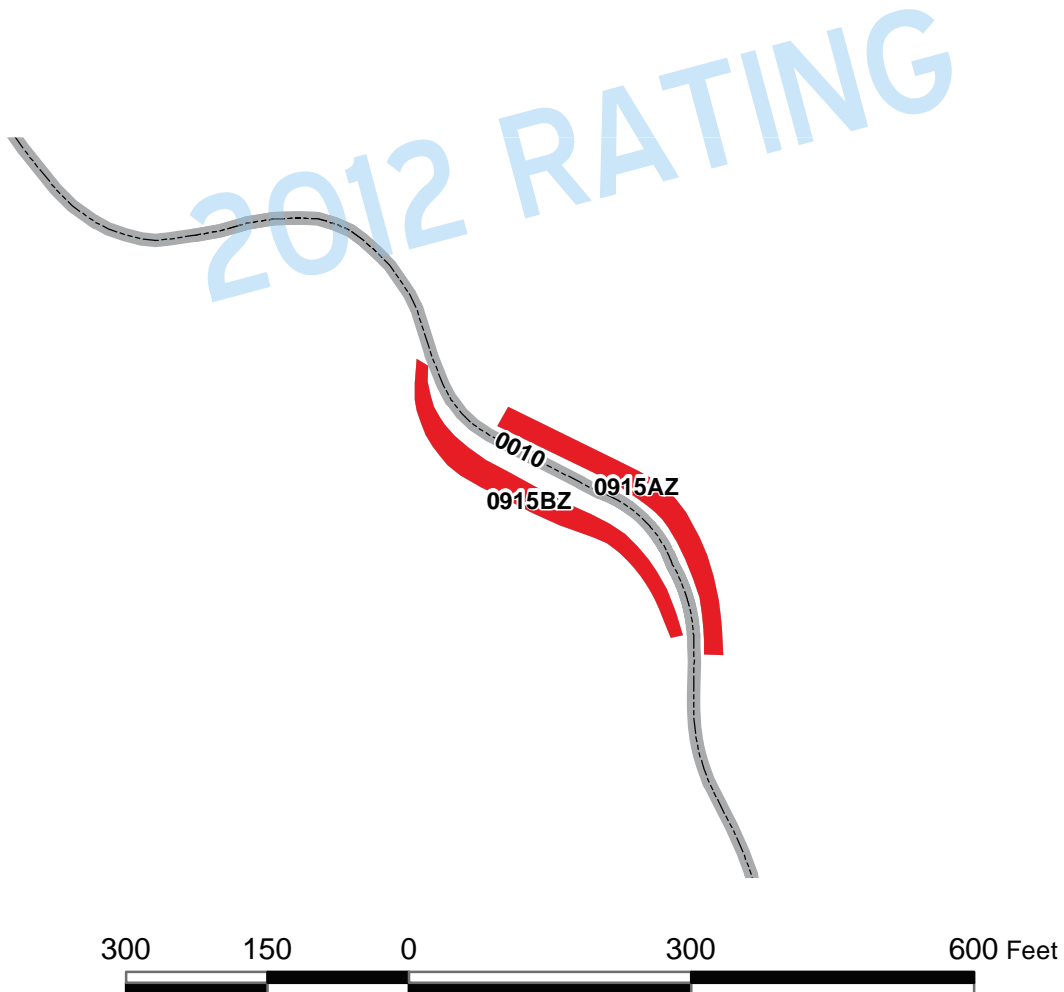


Hawaii Volcanoes National Park Route 0915ZZ Summary Record THURSTON LAVA TUBE PARKING AREAS

ADJACENT TO ROUTE 0010 (CRATER RIM DRIVE) ON LEFT AND RIGHT

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|---------------|
| 0915ZZ | PUBLIC | 1/17/2012 | 16461 | 0.284 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 1 | 0 | NO | STONE | 73 SUMMARY |

* Lane miles are based on 11' lane widths



Hawaii Volcanoes National Park

Route 0915AZ Subcomponent Record

THURSTON LAVA TUBE BUS PARKING AREA A

ADJACENT TO ROUTE 0010 (CRATER RIM DRIVE) AT MP 9.00 ON RIGHT

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0915AZ | PUBLIC | 1/17/2012 | 7882 | 0.136 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | STONE | 73 FAIR |

* Lane miles are based on 11' lane widths



Hawaii Volcanoes National Park

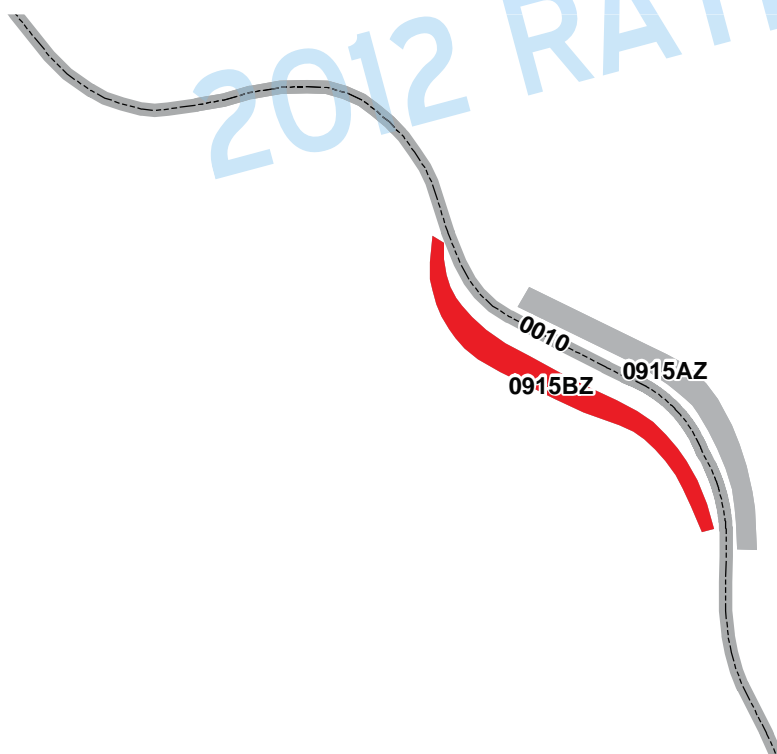
Route 0915BZ Subcomponent Record

THURSTON LAVA TUBE PARKING AREA B

ADJACENT TO ROUTE 0010 (CRATER RIM DRIVE) AT MP 9.01 ON LEFT

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0915BZ | PUBLIC | 1/17/2012 | 8579 | 0.148 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 1 | 0 | NO | STONE | 73 FAIR |

* Lane miles are based on 11' lane widths



Hawaii Volcanoes National Park

Route 0916

KILAUEA IKI PARKING

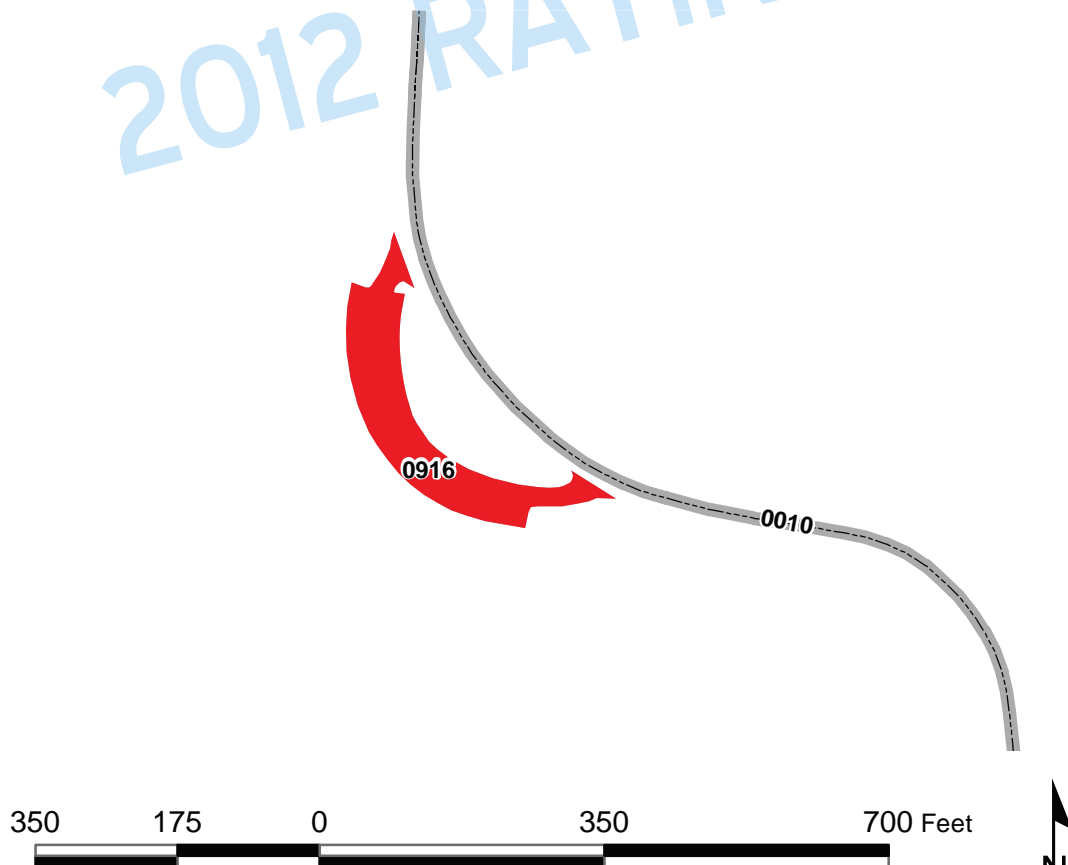
FROM ROUTE 0010 (CRATER RIM DRIVE) AT MP 9.31 ON LEFT
TO ROUTE 0010 (CRATER RIM DRIVE) AT MP 9.38 ON LEFT

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0916 | PUBLIC | 1/17/2012 | 24402 | 0.42 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 1 | 0 | NO | STONE | 73 FAIR |

* Lane miles are based on 11' lane widths



2012 RATING

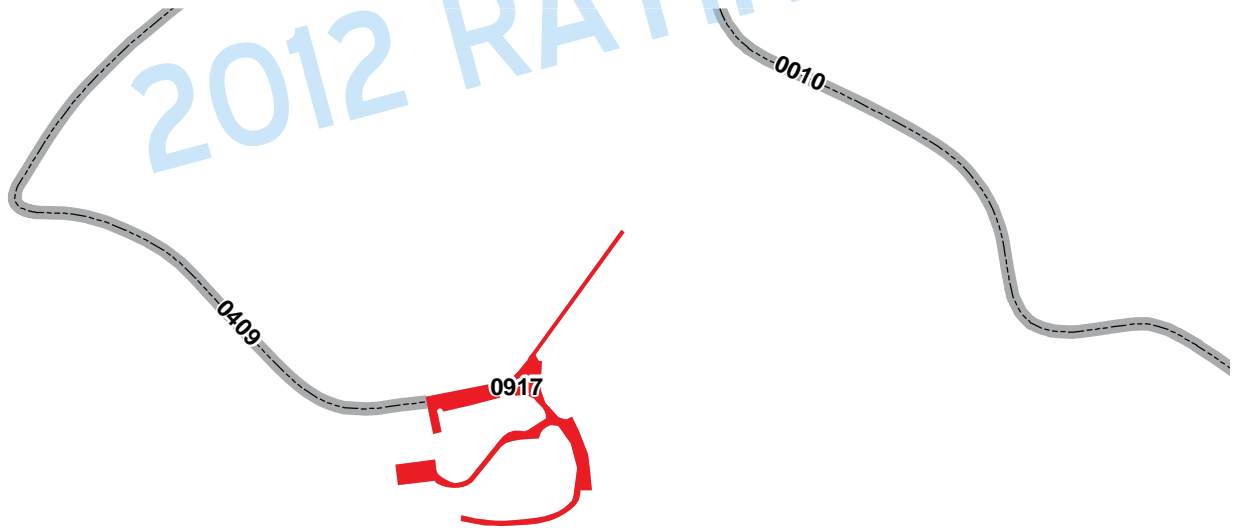


Hawaii Volcanoes National Park Route 0917 RESEARCH CENTER PARKING

FROM END OF ROUTE 0409 (RESOURCE MANAGEMENT ROAD)
TO PARKING

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0917 | NONPUBLIC | 1/18/2012 | 43025 | 0.741 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 1 | NO | NO | 45 POOR |

* Lane miles are based on 11' lane widths



Hawaii Volcanoes National Park

Route 0918

PUHIMAU CRATER PARKING

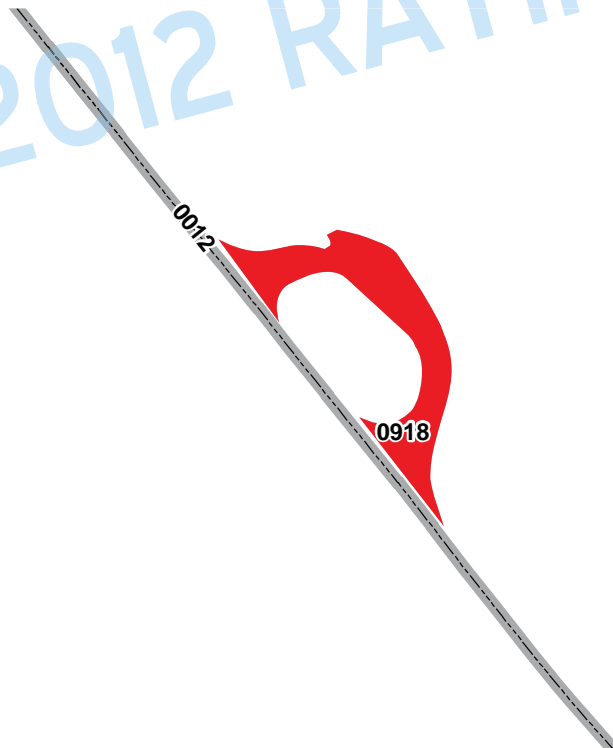
FROM ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 0.97 ON LEFT
TO ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 1.01 ON LEFT

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0918 | PUBLIC | 1/17/2012 | 13441 | 0.231 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | STONE | 73 FAIR |

* Lane miles are based on 11' lane widths



2012 RATING



Hawaii Volcanoes National Park

Route 0919

PAUAHI CRATER PARKING

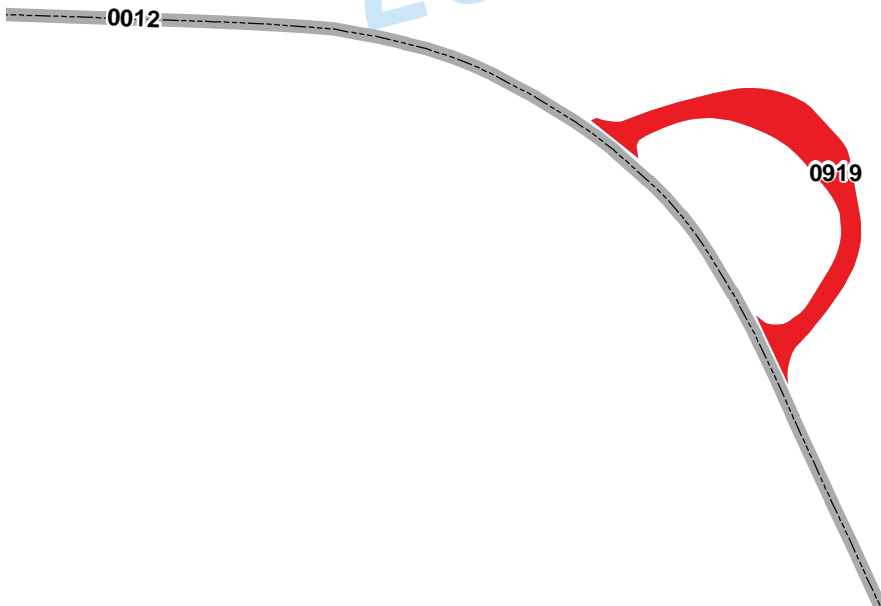
FROM ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 3.20 ON LEFT
TO ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 3.25 ON LEFT

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0919 | PUBLIC | 1/17/2012 | 16877 | 0.291 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | STONE | 73 FAIR |

* Lane miles are based on 11' lane widths



2012 RATING



Hawaii Volcanoes National Park

Route 0920

MAUNA ULU LAVA SHIELD PARKING

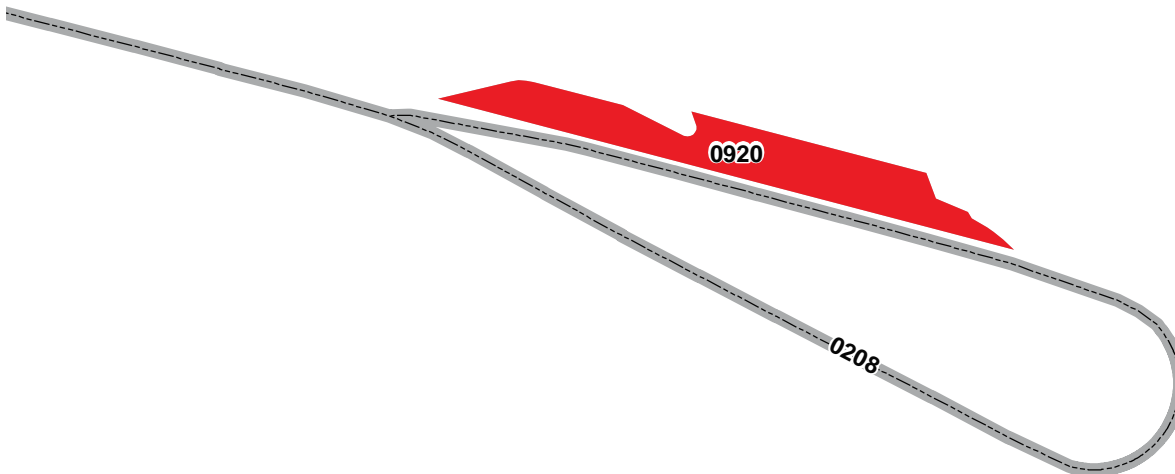
ADJACENT TO ROUTE 0208 (MAUNA ULU ACCESS ROAD) AT END

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0920 | PUBLIC | 1/17/2012 | 8504 | 0.146 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | STONE | 90 GOOD |

* Lane miles are based on 11' lane widths



2012 RATING



Hawaii Volcanoes National Park

Route 0921

KEALAKOMO PICNIC AREA PARKING

FROM ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 9.78 ON RIGHT
TO ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 9.85 ON RIGHT

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0921 | PUBLIC | 1/17/2012 | 17909 | 0.308 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | STONE | 73 FAIR |

* Lane miles are based on 11' lane widths



2012 RATING



Hawaii Volcanoes National Park

Route 0923

KIPUKA PUAULU TRAILHEAD PARKING

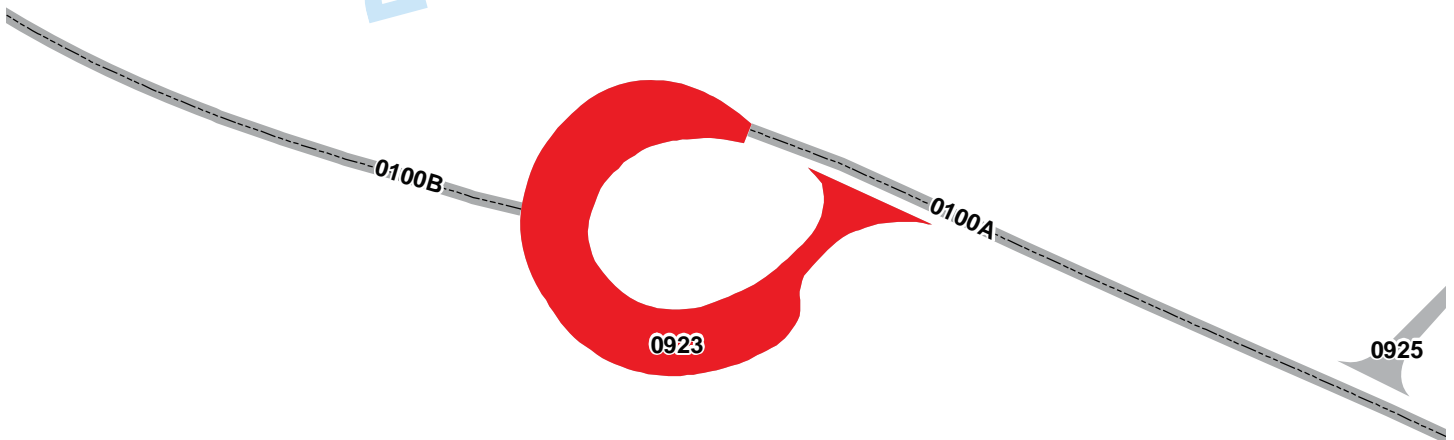
FROM END OF ROUTE 0100A (MAUNA LOA ROAD)
TO BEGINNING OF ROUTE 0100B (MAUNA LOA LOOKOUT ROAD)

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|-----------------|
| 0923 | PUBLIC | 1/18/2012 | 26493 | 0.456 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 1 | NO | NO | 97 EXCELLENT |

* Lane miles are based on 11' lane widths



2012 RATING



Hawaii Volcanoes National Park

Route 0925

KIPUKA PUAULU DAY USE AREA PARKING

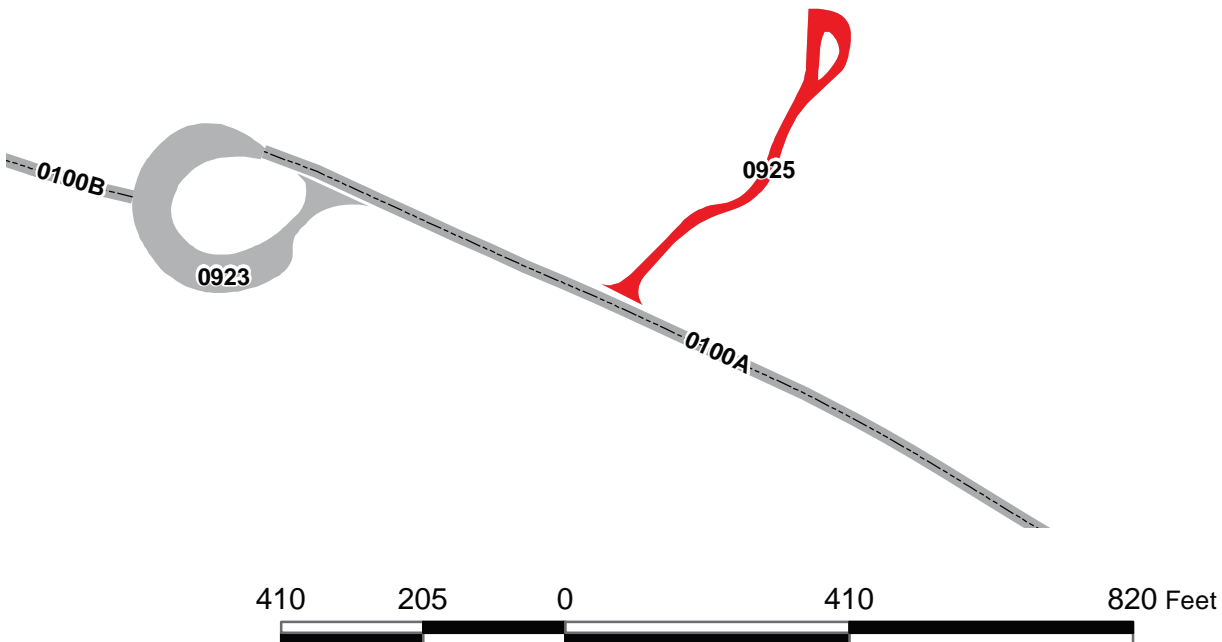
FROM ROUTE 0100A (MAUNA LOA ROAD) AT MP 1.49 ON RIGHT
TO PARKING

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|-----------------|
| 0925 | PUBLIC | 1/18/2012 | 11118 | 0.191 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | NO | 97 EXCELLENT |

* Lane miles are based on 11' lane widths



2012 RATING



Hawaii Volcanoes National Park

Route 0926

ENVIRONMENTAL EDUCATION CENTER PARKING

FROM ROUTE 0403 (SOUTH RESIDENCE LOOP) AT MP 0.14 ON RIGHT
TO PARKING

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0926 | PUBLIC | 1/18/2012 | 11550 | 0.199 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | NO | 73 FAIR |

* Lane miles are based on 11' lane widths



2012 RATING



Hawaii Volcanoes National Park

Route 0927

ERUPTION SITE TURN-AROUND PARKING

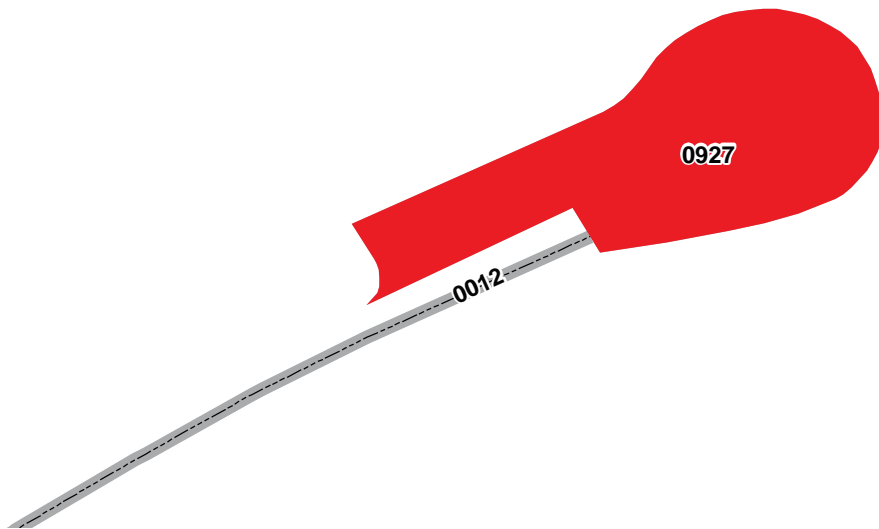
FROM END OF ROUTE 0012 (CHAIN OF CRATERS ROAD) AT END
TO PARKING

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0927 | PUBLIC | 1/17/2012 | 9984 | 0.172 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | STONE | 73 FAIR |

* Lane miles are based on 11' lane widths



2012 RATING



Hawaii Volcanoes National Park

Route 0928

TREE MOLDS PARKING

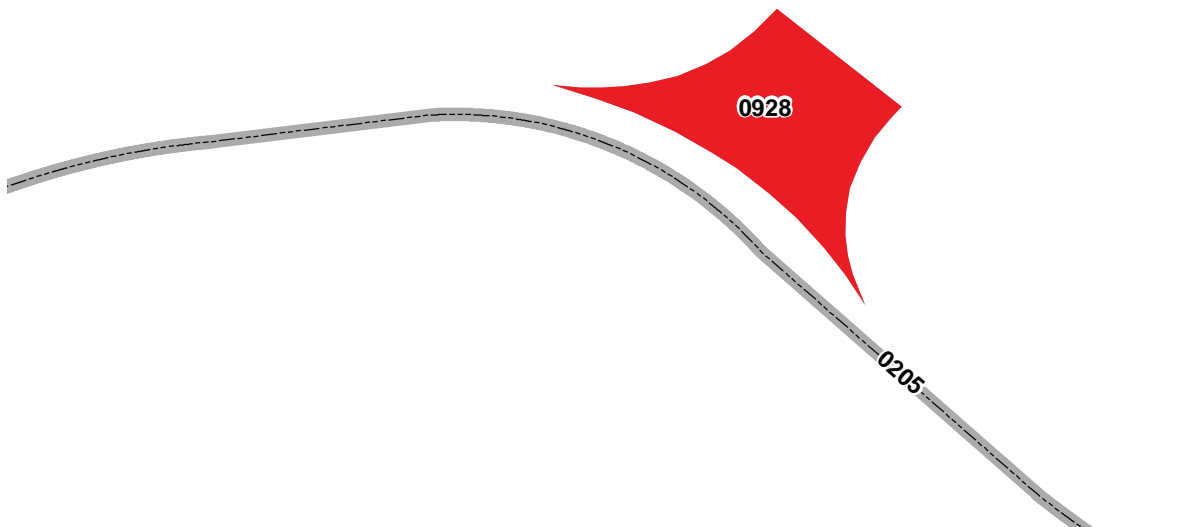
ADJACENT TO ROUTE 0205 (TREE MOLDS ROAD) AT MP 0.44 ON RIGHT

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|-----------------|
| 0928 | PUBLIC | 1/18/2012 | 1045 | 0.018 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | NO | 97 EXCELLENT |

* Lane miles are based on 11' lane widths



2012 RATING



Hawaii Volcanoes National Park Route 0930 FOOTPRINTS TRAILHEAD PARKING AREA

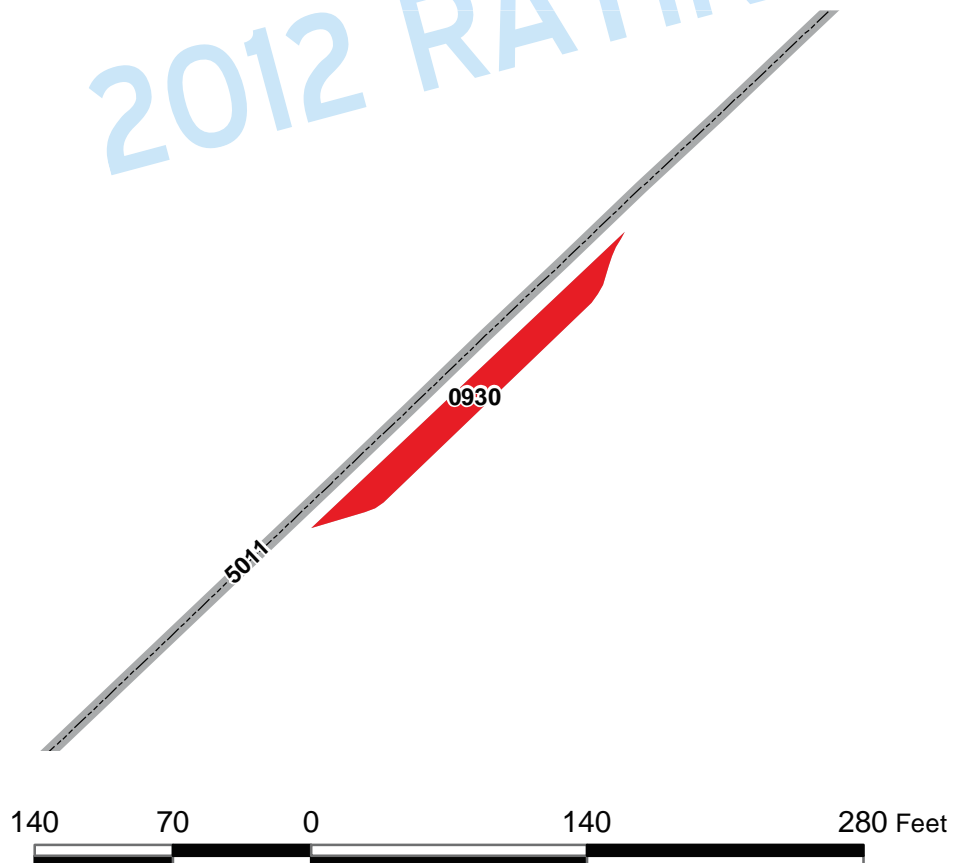
ADJ TO ROUTE 5011 (HAWAII STATE ROUTE 11 (HAWAII BELT ROAD / MAMALAHOA HIGHWAY))

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0930 | PUBLIC | 1/18/2012 | 2634 | 0.045 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | NO | 90 GOOD |

* Lane miles are based on 11' lane widths



2012 RATING



Hawaii Volcanoes National Park
Route 0931ZZ
KEANAKAKOI PARKING AREAS

Route 0931ZZ could not be collected for GPS, condition, and features in Cycle 5 because the parking area was inaccessible due to hazardous volcanic gas conditions.

This is the summary route for subcomponents 0931AZ and 0931BZ.

2012 RATING

Hawaii Volcanoes National Park
Route 0932
SOUTH WEST RIFT ZONE PARKING

Route 0932 could not be collected for GPS, condition, and features in Cycle 5 because the parking area was inaccessible due to hazardous volcanic gas conditions.

2012 RATING

Hawaii Volcanoes National Park

Route 0933

KULANAOKUAIKI CAMPGROUND PARKING

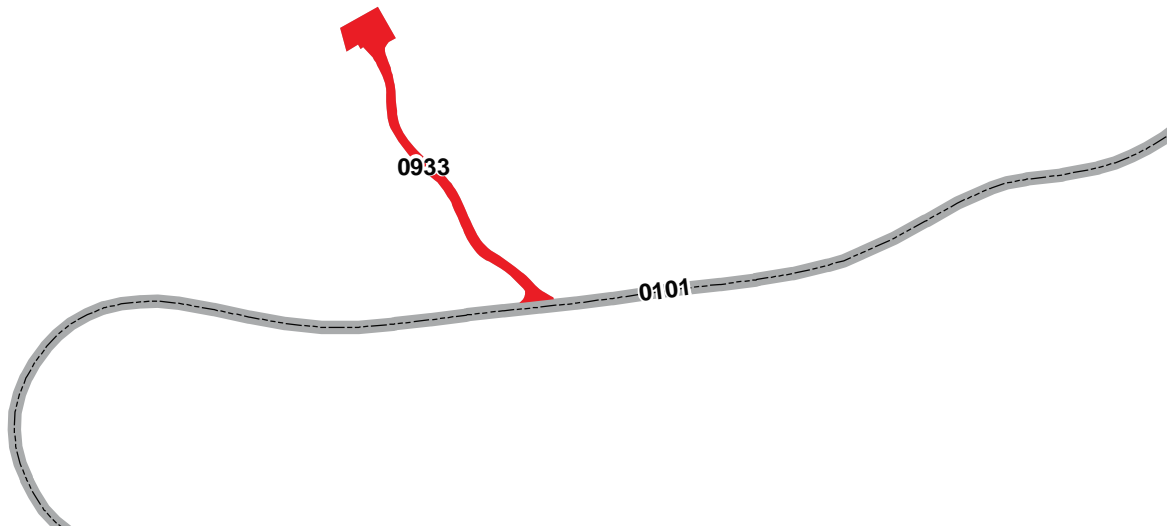
FROM ROUTE 0101 (HILINA PALI ROAD) AT MP 3.61 ON RIGHT
TO END

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0933 | PUBLIC | 1/17/2012 | 10527 | 0.181 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | NO | 73 FAIR |

* Lane miles are based on 11' lane widths



2012 RATING



Hawaii Volcanoes National Park

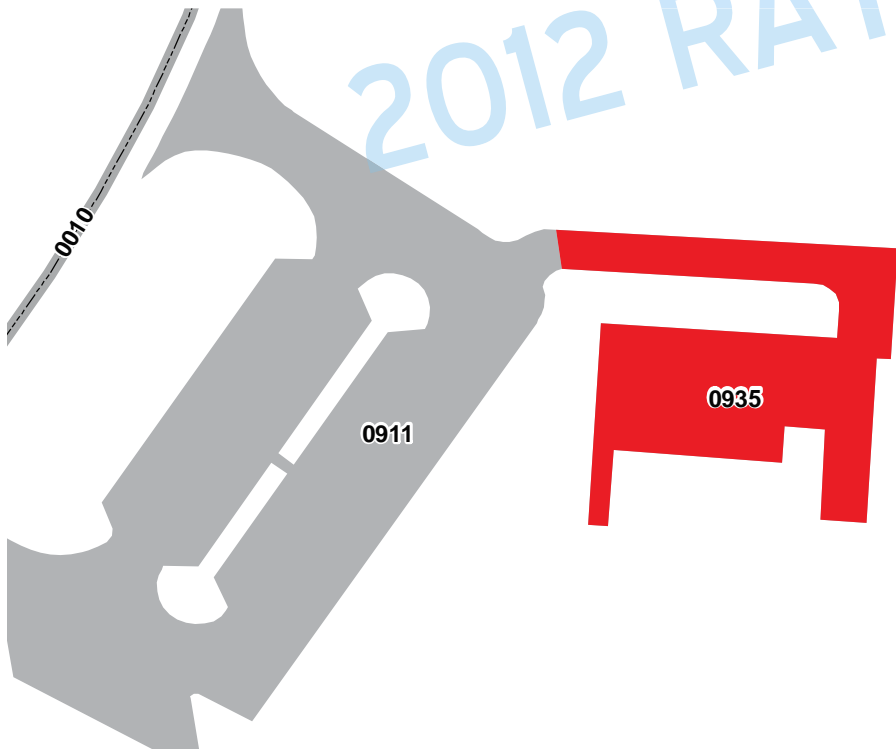
Route 0935

JAGGER EMPLOYEE PARKING

FROM ROUTE 0911 (VOLCANO OBSERVATORY PARKING)
TO PARKING

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0935 | NONPUBLIC | 1/18/2012 | 15199 | 0.262 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | STONE | 73 FAIR |

* Lane miles are based on 11' lane widths



Hawaii Volcanoes National Park

Route 0936

PU'U LOA PETROGLYPHS PARKING

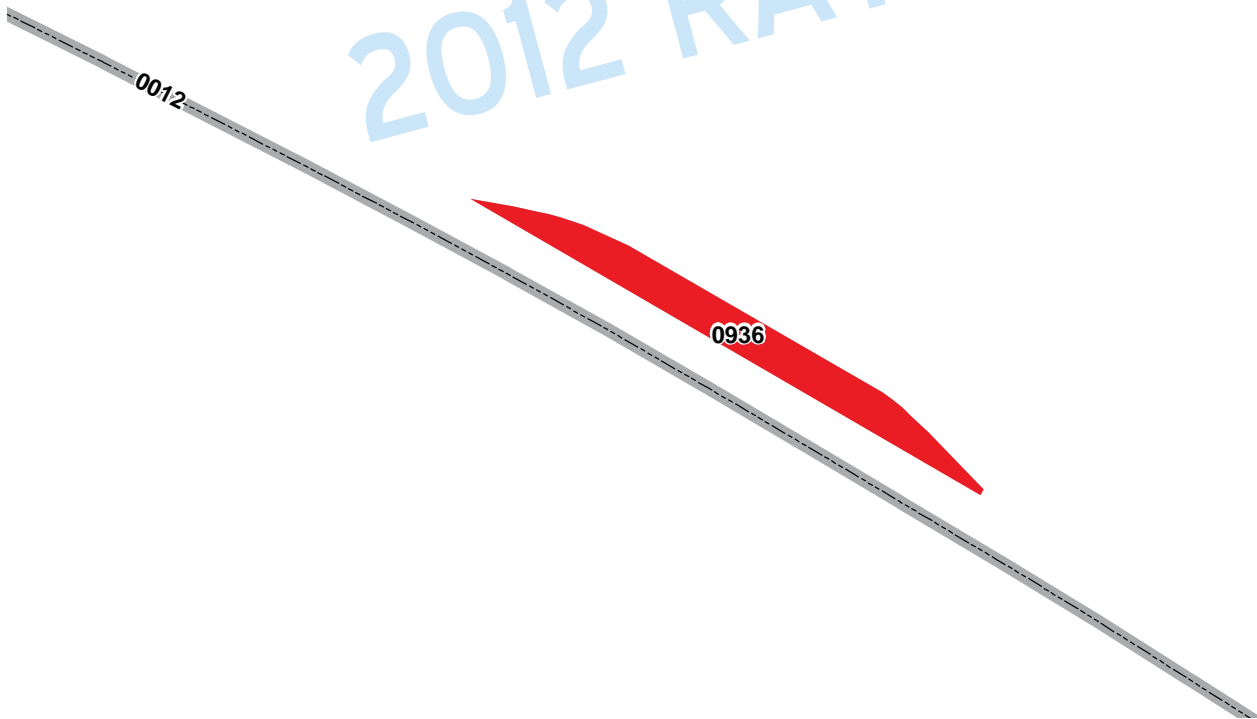
ADJACENT TO ROUTE 0012 (CHAIN OF CRATERS ROAD)

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0936 | PUBLIC | 1/17/2012 | 4127 | 0.071 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | STONE | 73 FAIR |

* Lane miles are based on 11' lane widths



2012 RATING



Hawaii Volcanoes National Park

Route 0937ZZ Summary Record

KILAUEA MILITARY CAMP PARKING AREAS

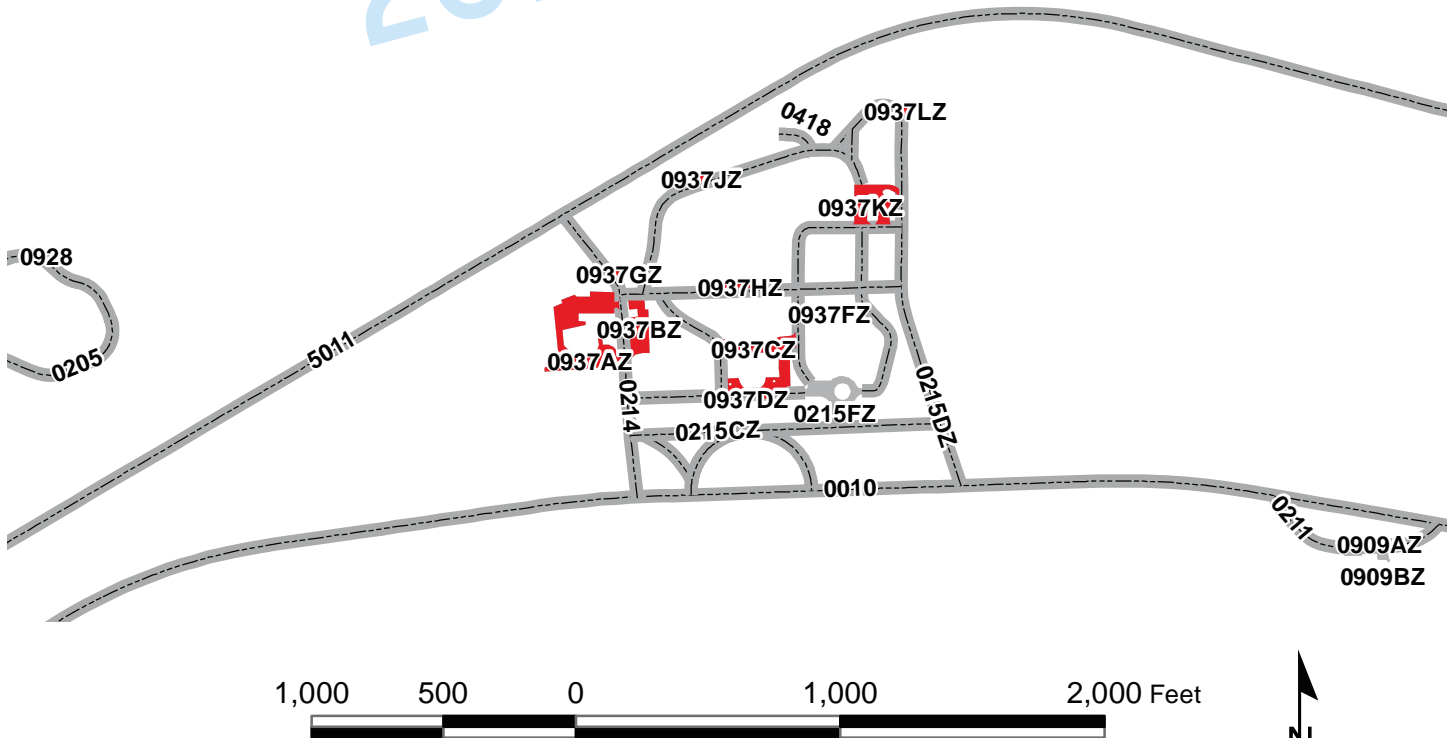
FROM ROUTES 0214 (KILAUEA MILITARY CAMP ROAD) AND 0215ZZ (KILAUEA MILITARY CAMP ROADS)
THROUGH KILAUEA MILITARY CAMP

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------------|---------------|
| 0937ZZ | PUBLIC | 1/17/2012 | 95723 | 1.649 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 4 | 4 | NO | CONCRETE/ STONE | 85 SUMMARY |

* Lane miles are based on 11' lane widths

Subcomponents 0937MZ, 0937NZ, and 0937OZ were recently paved and combined into 0937ZZ in 2014. Thus, the summary totals shown on this 2012 Interim Report page are no longer up to date. Refer to Section 7A for updated quantities.

2012 RATING



Hawaii Volcanoes National Park

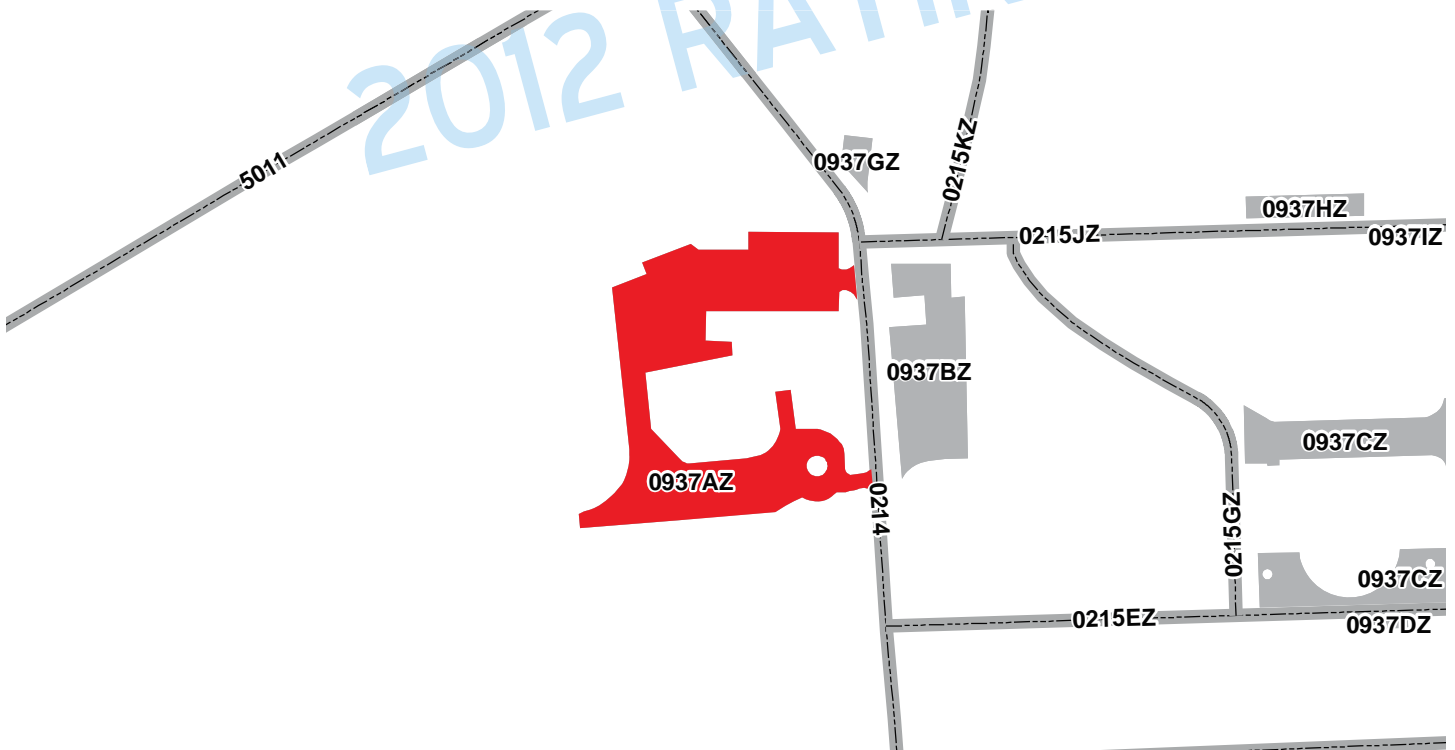
Route 0937AZ Subcomponent Record

KILAUEA MILITARY CAMP PARKING A

FROM ROUTE 0214 (KILAUEA MILITARY CAMP ROAD)
TO ROUTE 0214 (KILAUEA MILITARY CAMP ROAD)

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0937AZ | PUBLIC | 1/17/2012 | 37398 | 0.644 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 2 | 4 | NO | CONCRETE | 90 GOOD |

* Lane miles are based on 11' lane widths



Hawaii Volcanoes National Park

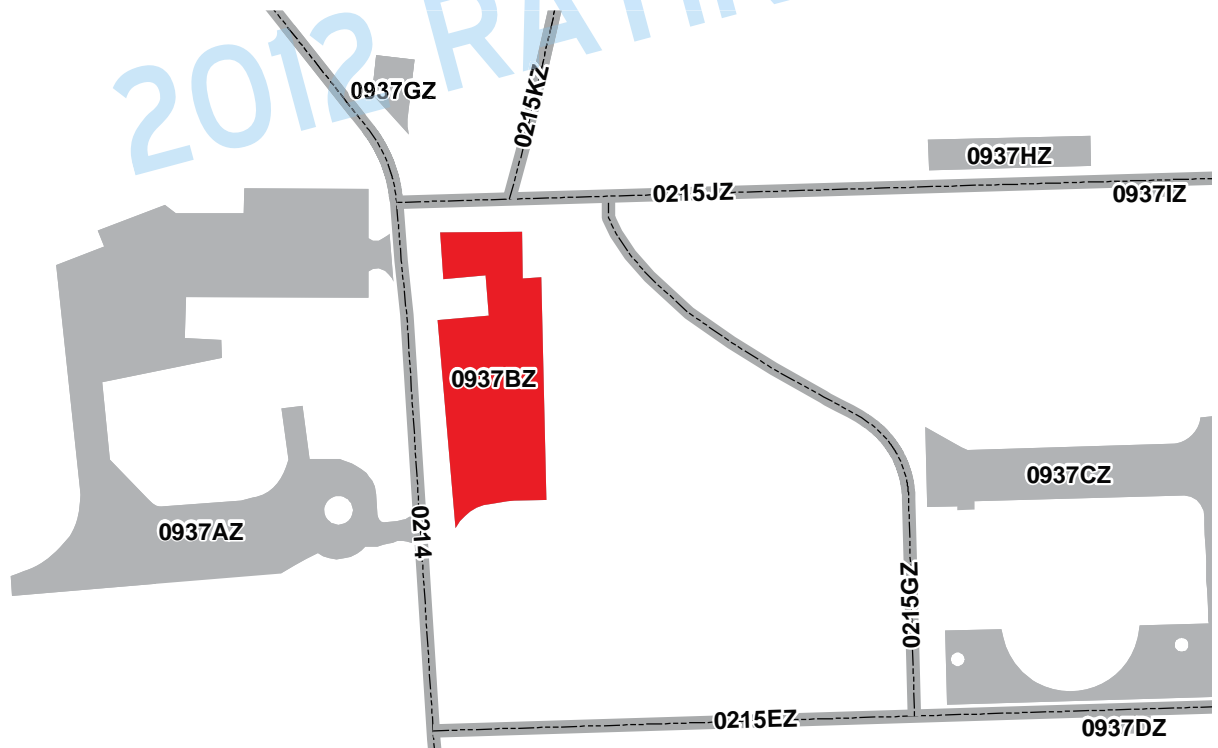
Route 0937BZ Subcomponent Record

KILAUEA MILITARY CAMP PARKING B

ADJACENT TO ROUTES 0214 (KILAUEA MILITARY CAMP ROAD)
AND 0215JZ (KILAUEA MILITARY CAMP ROAD J)

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0937BZ | PUBLIC | 1/17/2012 | 12623 | 0.217 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | NO | 90 GOOD |

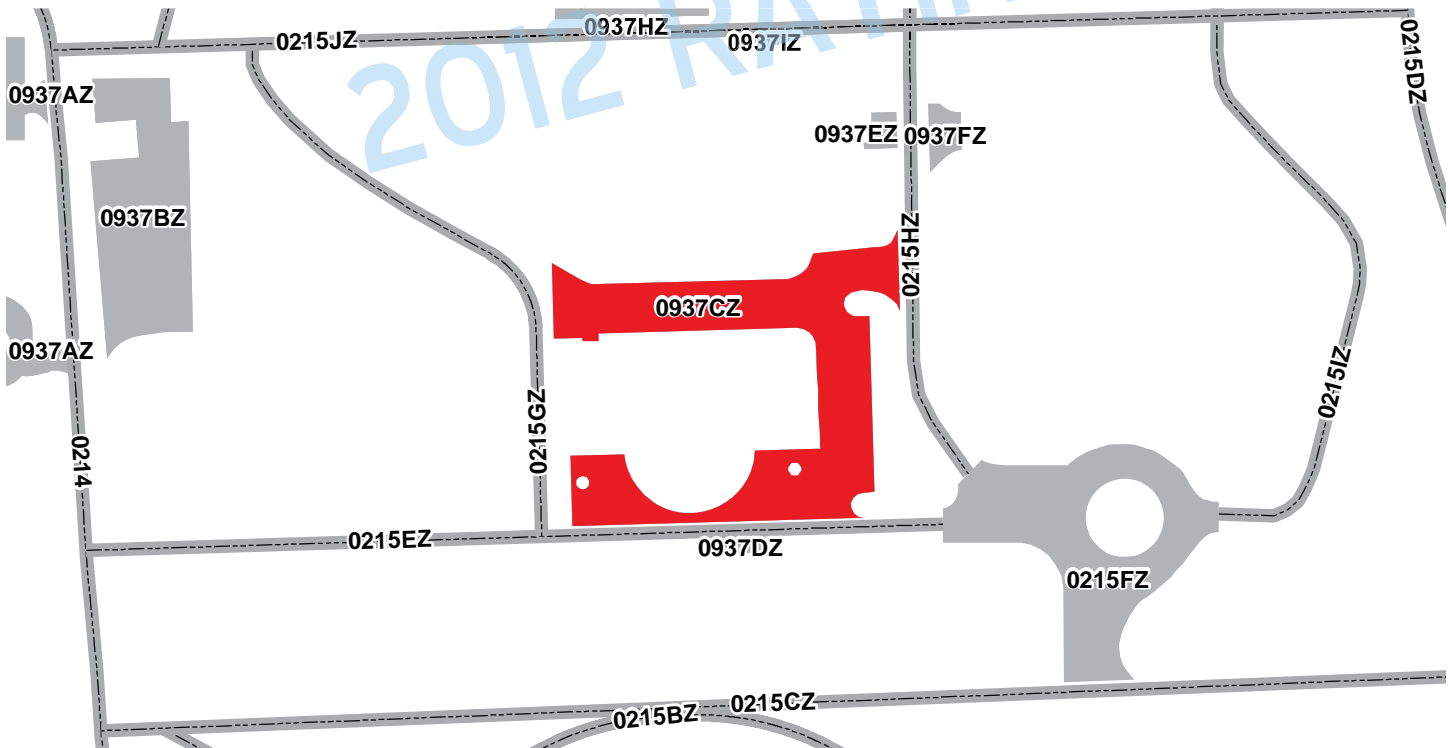
* Lane miles are based on 11' lane widths



Hawaii Volcanoes National Park
Route 0937CZ Subcomponent Record
KILAUEA MILITARY CAMP PARKING C
 FROM ROUTES 0215EZ (KILAUEA MILITARY CAMP ROAD E),
 0215GZ (KILAUEA MILITARY CAMP ROAD G),
 AND 0215HZ (KILAUEA MILITARY CAMP ROAD H)
 TO PARKING

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0937CZ | PUBLIC | 1/17/2012 | 22990 | 0.396 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 2 | 0 | NO | STONE | 90 GOOD |

* Lane miles are based on 11' lane widths



Hawaii Volcanoes National Park

Route 0937DZ Subcomponent Record

KILAUEA MILITARY CAMP PARKING D

ADJACENT TO ROUTE 0215EZ (KILAUEA MILITARY CAMP ROAD E)

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0937DZ | PUBLIC | 1/17/2012 | 476 | 0.008 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | STONE | 90 GOOD |

* Lane miles are based on 11' lane widths



2012 RATING

0937CZ

0215EZ

0937DZ



Hawaii Volcanoes National Park

Route 0937EZ Subcomponent Record

KILAUEA MILITARY CAMP PARKING E

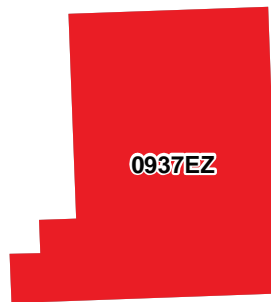
ADJACENT TO ROUTE 0215HZ (KILAUEA MILITARY CAMP ROAD H)

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0937EZ | PUBLIC | 1/17/2012 | 565 | 0.01 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | NO | 45 POOR |

* Lane miles are based on 11' lane widths

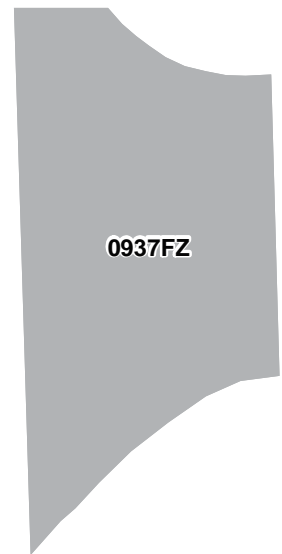


2012 RATING



0937EZ

0215HZ



0937FZ

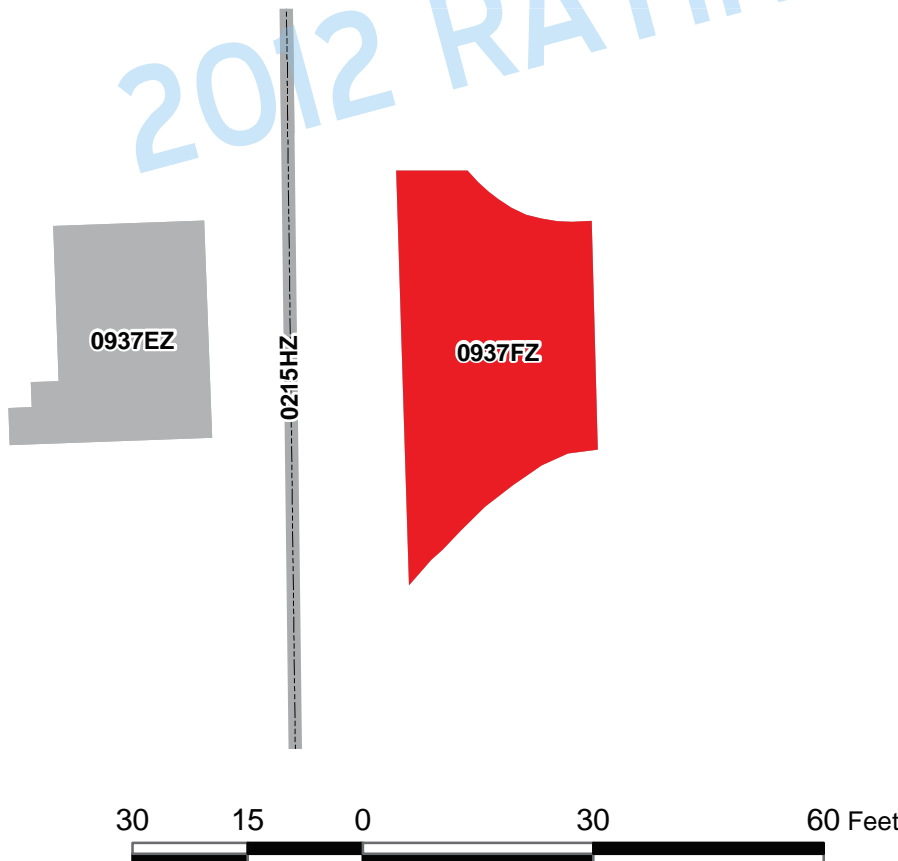


Hawaii Volcanoes National Park Route 0937FZ Subcomponent Record KILAUEA MILITARY CAMP PARKING F

ADJACENT TO ROUTE 0215HZ (KILAUEA MILITARY CAMP ROAD H)

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0937FZ | PUBLIC | 1/17/2012 | 943 | 0.016 | CO |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | STONE | 45 POOR |

* Lane miles are based on 11' lane widths



Hawaii Volcanoes National Park

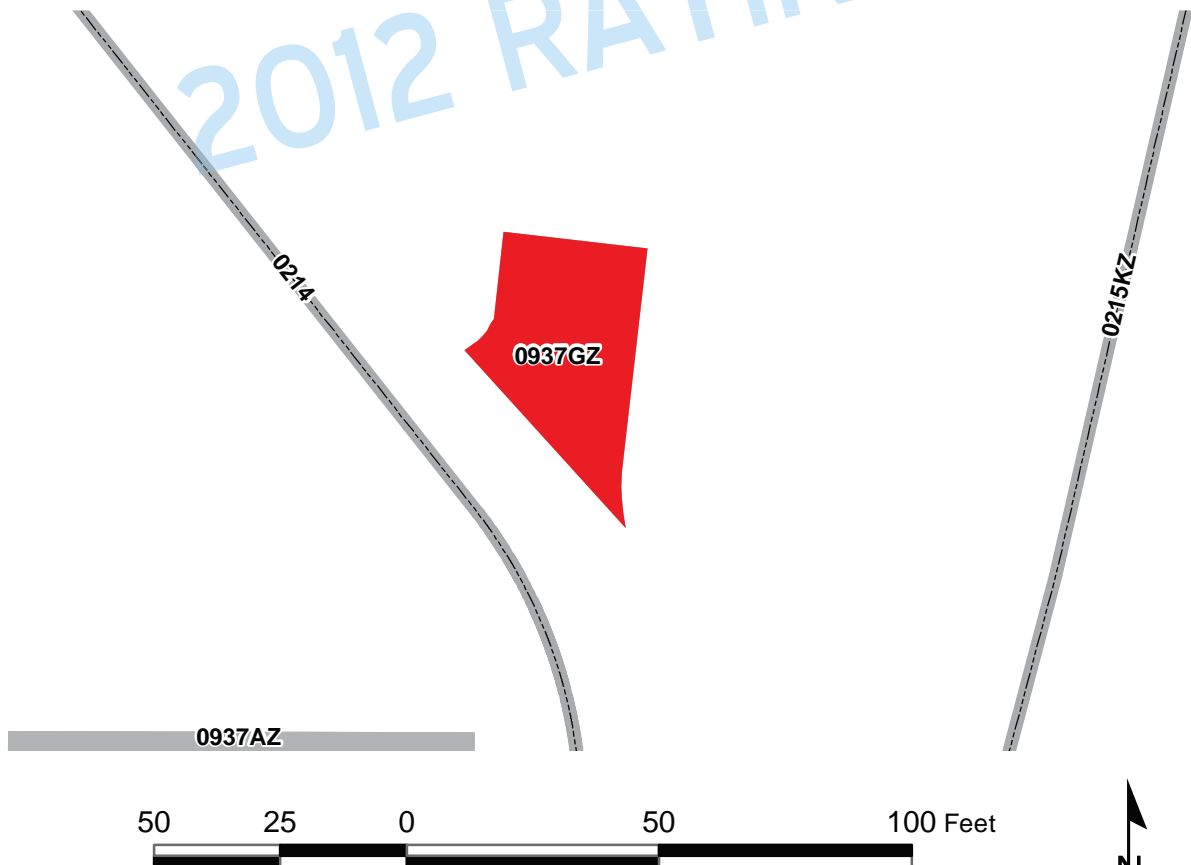
Route 0937GZ Subcomponent Record

KILAUEA MILITARY CAMP PARKING G

ADJACENT TO ROUTE 0214 (KILAUEA MILITARY CAMP ROAD)

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0937GZ | PUBLIC | 1/17/2012 | 1135 | 0.02 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | NO | 90 GOOD |

* Lane miles are based on 11' lane widths



Hawaii Volcanoes National Park Route 0937HZ Subcomponent Record KILAUEA MILITARY CAMP PARKING H

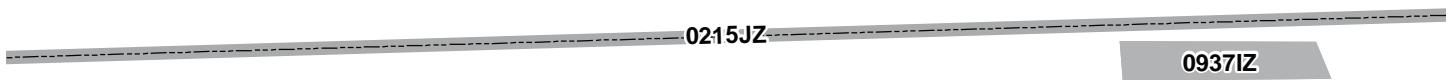
ADJACENT TO ROUTE 0215JZ (KILAUEA MILITARY CAMP ROAD J)

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0937HZ | PUBLIC | 1/17/2012 | 2548 | 0.044 | CO |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | NO | 45 POOR |

* Lane miles are based on 11' lane widths



2012 RATING



Hawaii Volcanoes National Park Route 0937IZ Subcomponent Record KILAUEA MILITARY CAMP PARKING I

ADJACENT TO ROUTE 0215JZ (KILAUEA MILITARY CAMP ROAD J)

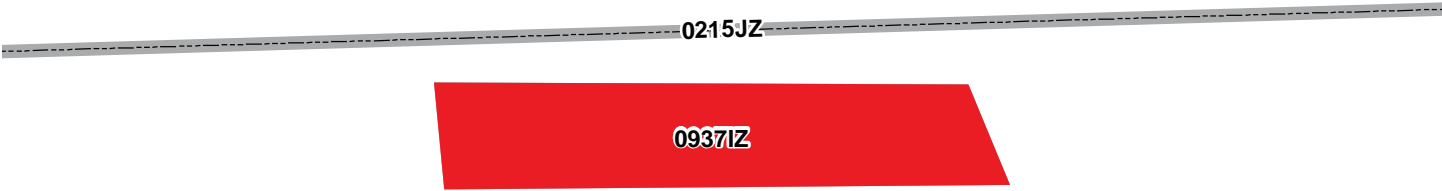
| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|-----------------|
| 0937IZ | PUBLIC | 1/17/2012 | 322 | 0.006 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | STONE | 97 EXCELLENT |

* Lane miles are based on 11' lane widths



0937HZ

2012 RATING



Hawaii Volcanoes National Park

Route 0937JZ Subcomponent Record

KILAUEA MILITARY CAMP PARKING J

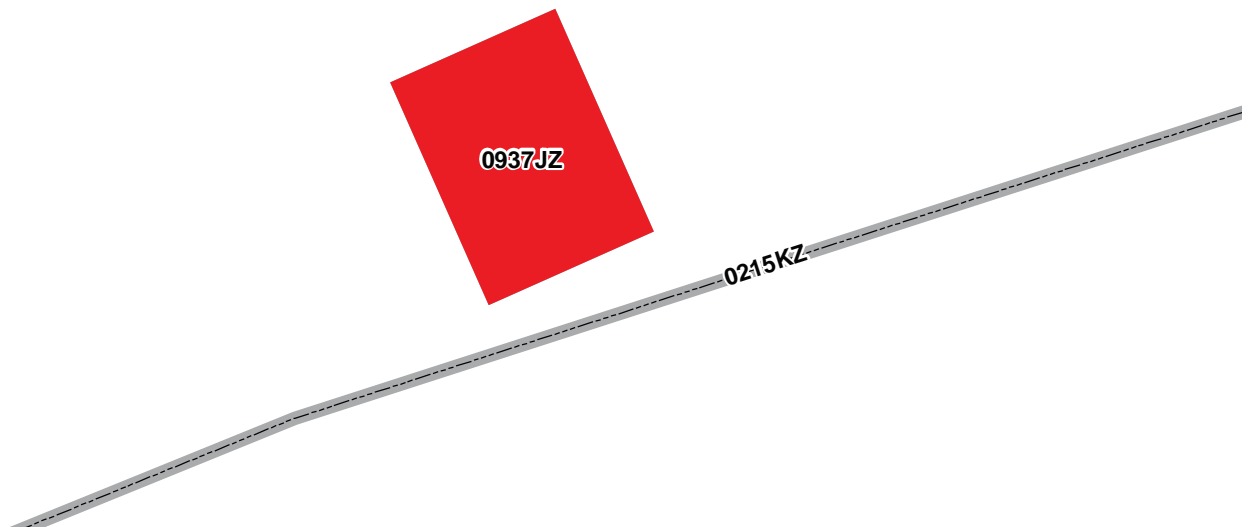
ADJACENT TO ROUTE 0215KZ (KILAUEA MILITARY CAMP ROAD K)

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0937JZ | PUBLIC | 1/17/2012 | 756 | 0.013 | CO |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | NO | 45 POOR |

* Lane miles are based on 11' lane widths



2012 RATING



Hawaii Volcanoes National Park
Route 0937KZ Subcomponent Record
KILAUEA MILITARY CAMP PARKING K
 FROM ROUTES 0215DZ (KILAUEA MILITARY CAMP ROAD D),
 0215HZ (KILAUEA MILITARY CAMP ROAD H),
 AND 0215KZ (KILAUEA MILITARY CAMP ROAD K)
 TO PARKING

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0937KZ | PUBLIC | 1/17/2012 | 14934 | 0.257 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | NO | 73 FAIR |

* Lane miles are based on 11' lane widths



2012 RATING



Hawaii Volcanoes National Park

Route 0937LZ Subcomponent Record

KILAUEA MILITARY CAMP PARKING L

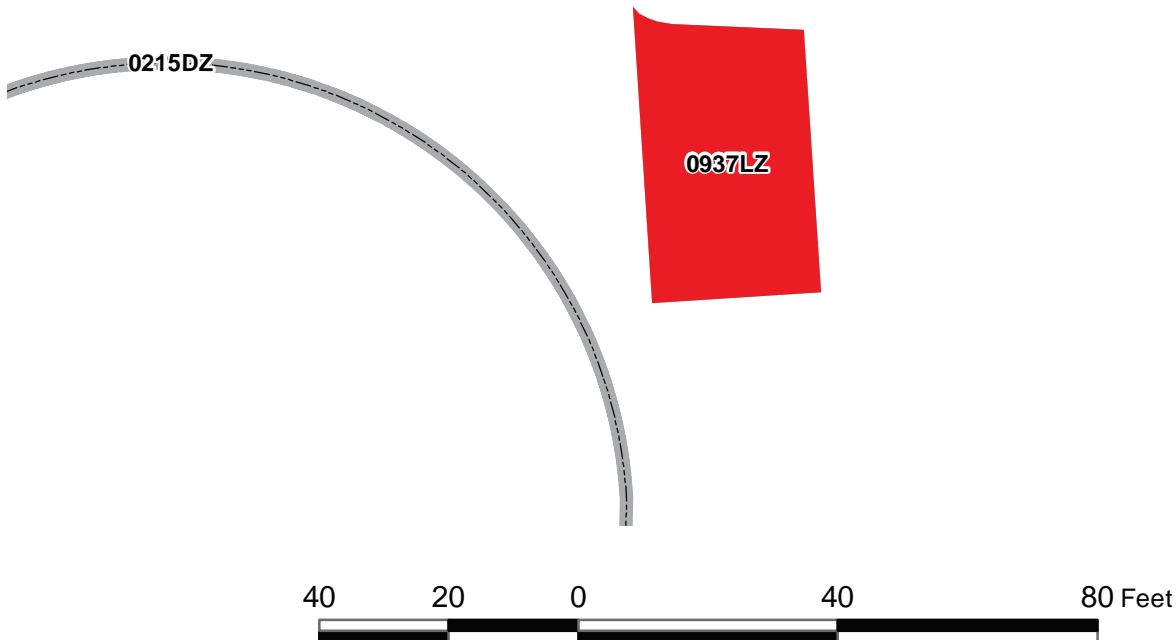
ADJACENT TO ROUTE 0215DZ (KILAUEA MILITARY CAMP ROAD D)

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0937LZ | PUBLIC | 1/17/2012 | 1033 | 0.018 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | NO | 90 GOOD |

* Lane miles are based on 11' lane widths



2012 RATING



Hawaii Volcanoes National Park
Route 0937MZ Subcomponent Record
KILAUEA MILITARY CAMP PARKING M

Route 0937MZ was recently paved and collected in 2014 for the first time. Therefore, there is no 2012 manual rating to show in Section 7B. See Section 7A.

2012 RATING

Hawaii Volcanoes National Park
Route 0937NZ Subcomponent Record
KILAUEA MILITARY CAMP PARKING N

Route 0937NZ was recently paved and collected in 2014 for the first time. Therefore, there is no 2012 manual rating to show in Section 7B. See Section 7A.

2012 RATING

Hawaii Volcanoes National Park
Route 0937OZ Subcomponent Record
KILAUEA MILITARY CAMP PARKING O

Route 0937OZ was recently paved and collected in 2014 for the first time. Therefore, there is no 2012 manual rating to show in Section 7B. See Section 7A.

2012 RATING

Hawaii Volcanoes National Park

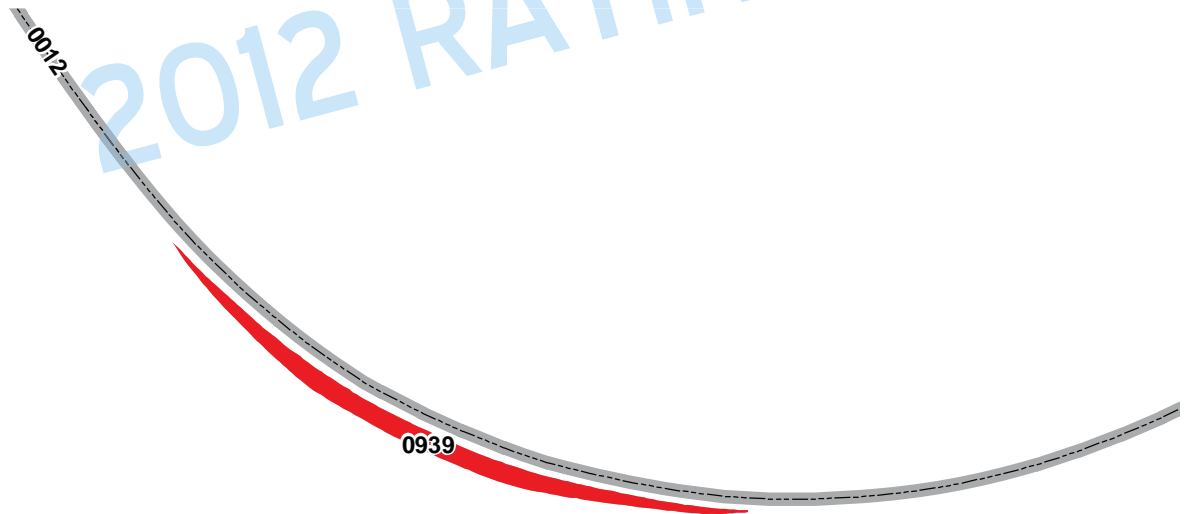
Route 0939

MULAWAI A PELE TRAILHEAD PARKING

ADJACENT TO ROUTE 0012 (CHAIN OF CRATERS ROAD)

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0939 | PUBLIC | 1/17/2012 | 13049 | 0.225 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | STONE | 90 GOOD |

* Lane miles are based on 11' lane widths



Hawaii Volcanoes National Park

Route 0940

HILINA PALI HANDICAP OVERLOOK PARKING

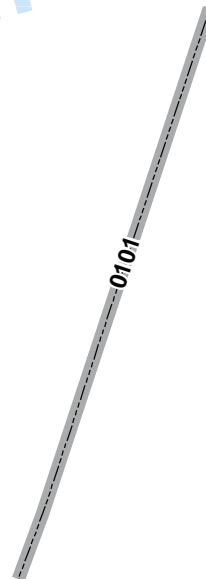
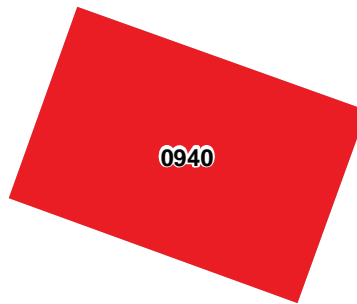
ADJACENT TO END OF ROUTE 0101 (HILINA PALI ROAD)

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0940 | PUBLIC | 1/17/2012 | 454 | 0.008 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | NO | 90 GOOD |

* Lane miles are based on 11' lane widths



2012 RATING



Hawaii Volcanoes National Park

Route 0941

VOLCANO ART CENTER HANDICAP PARKING

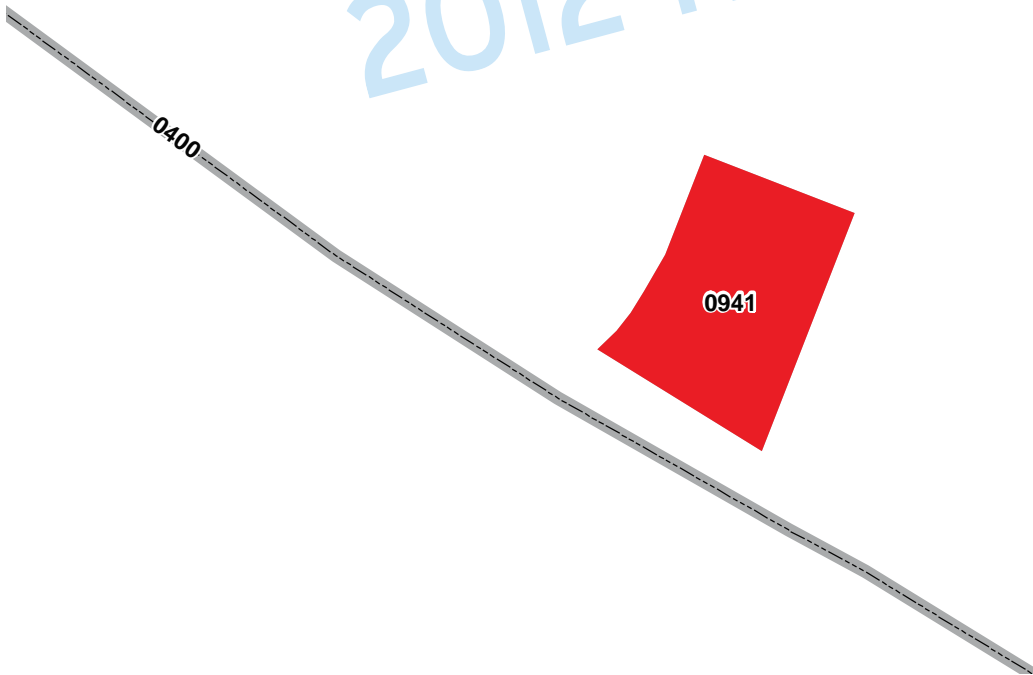
ADJACENT TO ROUTE 0400 (WATER TANK ROAD)

| Route Number | Public / Non Public | Date Visited | Area (sq ft) | Lane Miles * | Surface Type |
|--------------|---------------------|--------------|---------------|--------------|--------------|
| 0941 | PUBLIC | 1/18/2012 | 395 | 0.007 | AS |
| Culverts | Drop Inlets | Gates | Curb & Gutter | Curb | PCR |
| 0 | 0 | 0 | NO | NO | 73 FAIR |

* Lane miles are based on 11' lane widths



2012 RATING



Section 8
Parkwide/Route
Maintenance Features Summaries



Hawaii Volcanoes National Park



Federal Lands Highway
Road Inventory Program

HAVO: PARKWIDE MAINTENANCE FEATURES SUMMARY

Includes DCV, MRL, MRP & PKG routes collected in Cycle-5

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all DCV driven routes. Culverts and drop inlets were also collected on all Manually Rated Routes and Paved Parking areas. Those totals are reflected below.

| FEATURE | LINEAR FEET | COUNT |
|--------------------|--------------------|--------------|
| BRIDGE | -- | 0 |
| CATTLE GUARD | -- | 3 |
| CULVERT | -- | 12 |
| CURB | 16,649 | -- |
| DROP INLET | -- | 26 |
| GATE | -- | 41 |
| GUARD/GUIDE RAIL | 3,608 | -- |
| CABLE | 0 | -- |
| NON-CABLE | 3,608 | -- |
| GUARD/GUIDE WALL | 1,611 | -- |
| BOLLARD | 0 | -- |
| TEMPORARY BARRIER | 0 | -- |
| NON TEMP/BOLLARD | 1,611 | -- |
| INTERSECTION | -- | 265 |
| LOW WATER CROSSING | 258 | 3 |
| MILE MARKER | -- | 12 |
| OVERPASS | -- | 0 |
| PARK BOUNDARY | -- | 0 |
| PAVED DITCH | 195 | -- |
| PULLOUT | 9,630 | 23 |
| RAILROAD CROSSING | -- | 0 |
| RETAINING WALL | 53 | 1 |
| SIGN | -- | 489 |
| STATE BOUNDARY | -- | 0 |
| TRAFFIC LIGHT | -- | 0 |
| TUNNEL | 0 | 0 |

HAVO: DCV ROUTE MAINTENANCE FEATURES SUMMARY

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5.

| FEATURE | ROUTE 0010 CRATER RIM DRIVE | ROUTE 0012 CHAIN OF CRATERS ROAD | ROUTE 0013 OFFICE AREA STREET | ROUTE 0100A MAUNA LOA ROAD | ROUTE 0100B MAUNA LOA LOOKOUT ROAD | ROUTE 0101 HILINA PALI ROAD | UNIT |
|--------------------|--------------------------------|-------------------------------------|----------------------------------|-------------------------------|---------------------------------------|--------------------------------|-------------|
| BRIDGE | 0 | 0 | 0 | 0 | 0 | 0 | EACH |
| CATTLE GUARD | 0 | 1 | 0 | 0 | 2 | 0 | EACH |
| CULVERT | 2 | 0 | 0 | 0 | 3 | 0 | EACH |
| CURB | 550 | 8,289 | 33 | 0 | 0 | 0 | LINEAR FEET |
| DROP INLET | 2 | 0 | 0 | 0 | 0 | 0 | EACH |
| GATE | 4 | 6 | 0 | 0 | 3 | 2 | EACH |
| GUARD/GUIDE RAIL | 32 | 3,544 | 0 | 0 | 0 | 0 | LINEAR FEET |
| CABLE | 0 | 0 | 0 | 0 | 0 | 0 | LINEAR FEET |
| NON-CABLE | 32 | 3,544 | 0 | 0 | 0 | 0 | LINEAR FEET |
| GUARD/GUIDE WALL | 1,357 | 222 | 0 | 0 | 0 | 0 | LINEAR FEET |
| BOLLARD | 0 | 0 | 0 | 0 | 0 | 0 | LINEAR FEET |
| TEMPORARY BARRIER | 0 | 0 | 0 | 0 | 0 | 0 | LINEAR FEET |
| NON TEMP/BOLLARD | 1,357 | 222 | 0 | 0 | 0 | 0 | LINEAR FEET |
| INTERSECTION | 36 | 17 | 6 | 7 | 7 | 8 | EACH |
| LOW WATER CROSSING | 0 | 0 | 0 | 0 | 0 | 3 | EACH |
| LOW WATER CROSSING | 0 | 0 | 0 | 0 | 0 | 258 | LINEAR FEET |
| MILE MARKER | 0 | 12 | 0 | 0 | 0 | 0 | EACH |
| OVERPASS | 0 | 0 | 0 | 0 | 0 | 0 | EACH |
| PARK BOUNDARY | 0 | 0 | 0 | 0 | 0 | 0 | EACH |
| PAVED DITCH | 195 | 0 | 0 | 0 | 0 | 0 | LINEAR FEET |
| PULLOUT | 0 | 23 | 0 | 0 | 0 | 0 | EACH |
| PULLOUT | 0 | 9,630 | 0 | 0 | 0 | 0 | LINEAR FEET |
| RAILROAD CROSSING | 0 | 0 | 0 | 0 | 0 | 0 | EACH |
| RETAINING WALL | 1 | 0 | 0 | 0 | 0 | 0 | EACH |
| RETAINING WALL | 53 | 0 | 0 | 0 | 0 | 0 | LINEAR FEET |
| SIGN | 147 | 106 | 4 | 15 | 43 | 31 | EACH |
| STATE BOUNDARY | 0 | 0 | 0 | 0 | 0 | 0 | EACH |
| TRAFFIC LIGHT | 0 | 0 | 0 | 0 | 0 | 0 | EACH |
| TUNNEL | 0 | 0 | 0 | 0 | 0 | 0 | EACH |
| TUNNEL | 0 | 0 | 0 | 0 | 0 | 0 | LINEAR FEET |

NOTE: Features were not collected along Route 0010 from mile posts 2.83 to 7.54 because that portion of the road was inaccessible due to hazardous volcanic gas conditions.

HAVO: DCV ROUTE MAINTENANCE FEATURES SUMMARY

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5.

| FEATURE | ROUTE 0201 KILAUEA OVERLOOK ROAD | ROUTE 0204A NAMAKANI PAIO CAMPGROUND ROAD | ROUTE 0205 TREE MOLDS ROAD | ROUTE 0208 MAUNA ULU ACCESS ROAD | ROUTE 0209 PUU PUI OVERLOOK ROAD | ROUTE 0211 STEAM VENTS ROAD | UNIT |
|--------------------|-------------------------------------|---|-------------------------------|-------------------------------------|-------------------------------------|--------------------------------|-------------|
| BRIDGE | 0 | 0 | 0 | 0 | 0 | 0 | EACH |
| CATTLE GUARD | 0 | 0 | 0 | 0 | 0 | 0 | EACH |
| CULVERT | 0 | 0 | 0 | 0 | 0 | 0 | EACH |
| CURB | 0 | 0 | 0 | 253 | 0 | 253 | LINEAR FEET |
| DROP INLET | 0 | 0 | 0 | 0 | 0 | 0 | EACH |
| GATE | 0 | 2 | 0 | 1 | 1 | 0 | EACH |
| GUARD/GUIDE RAIL | 0 | 0 | 32 | 0 | 0 | 0 | LINEAR FEET |
| CABLE | 0 | 0 | 0 | 0 | 0 | 0 | LINEAR FEET |
| NON-CABLE | 0 | 0 | 32 | 0 | 0 | 0 | LINEAR FEET |
| GUARD/GUIDE WALL | 0 | 0 | 0 | 0 | 0 | 0 | LINEAR FEET |
| BOLLARD | 0 | 0 | 0 | 0 | 0 | 0 | LINEAR FEET |
| TEMPORARY BARRIER | 0 | 0 | 0 | 0 | 0 | 0 | LINEAR FEET |
| NON TEMP/BOLLARD | 0 | 0 | 0 | 0 | 0 | 0 | LINEAR FEET |
| INTERSECTION | 4 | 8 | 7 | 8 | 3 | 7 | EACH |
| LOW WATER CROSSING | 0 | 0 | 0 | 0 | 0 | 0 | EACH |
| LOW WATER CROSSING | 0 | 0 | 0 | 0 | 0 | 0 | LINEAR FEET |
| MILE MARKER | 0 | 0 | 0 | 0 | 0 | 0 | EACH |
| OVERPASS | 0 | 0 | 0 | 0 | 0 | 0 | EACH |
| PARK BOUNDARY | 0 | 0 | 0 | 0 | 0 | 0 | EACH |
| PAVED DITCH | 0 | 0 | 0 | 0 | 0 | 0 | LINEAR FEET |
| PULLOUT | 0 | 0 | 0 | 0 | 0 | 0 | EACH |
| PULLOUT | 0 | 0 | 0 | 0 | 0 | 0 | LINEAR FEET |
| RAILROAD CROSSING | 0 | 0 | 0 | 0 | 0 | 0 | EACH |
| RETAINING WALL | 0 | 0 | 0 | 0 | 0 | 0 | EACH |
| RETAINING WALL | 0 | 0 | 0 | 0 | 0 | 0 | LINEAR FEET |
| SIGN | 6 | 18 | 9 | 8 | 5 | 6 | EACH |
| STATE BOUNDARY | 0 | 0 | 0 | 0 | 0 | 0 | EACH |
| TRAFFIC LIGHT | 0 | 0 | 0 | 0 | 0 | 0 | EACH |
| TUNNEL | 0 | 0 | 0 | 0 | 0 | 0 | EACH |
| TUNNEL | 0 | 0 | 0 | 0 | 0 | 0 | LINEAR FEET |

HAVO: DCV ROUTE MAINTENANCE FEATURES SUMMARY

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5.

| FEATURE | ROUTE 0214 KILAUEA MILITARY CAMP ROAD | ROUTE 0215ZZ KILAUEA MILITARY CAMP ROADS | ROUTE 0400 WATER TANK ROAD | ROUTE 0401 NORTH RESIDENCE ROAD | ROUTE 0403 SOUTH RESIDENCE LOOP | ROUTE 0405 AINAHOU ROAD | UNIT |
|--------------------|--|---|-------------------------------|------------------------------------|------------------------------------|----------------------------|-------------|
| BRIDGE | 0 | 0 | 0 | 0 | 0 | 0 | EACH |
| CATTLE GUARD | 0 | 0 | 0 | 0 | 0 | 0 | EACH |
| CULVERT | 0 | 0 | 0 | 0 | 0 | 0 | EACH |
| CURB | 169 | 7,023 | 47 | 32 | 0 | 0 | LINEAR FEET |
| DROP INLET | 1 | 6 | 0 | 0 | 0 | 0 | EACH |
| GATE | 2 | 3 | 2 | 2 | 0 | 0 | EACH |
| GUARD/GUIDE RAIL | 0 | 0 | 0 | 0 | 0 | 0 | LINEAR FEET |
| CABLE | 0 | 0 | 0 | 0 | 0 | 0 | LINEAR FEET |
| NON-CABLE | 0 | 0 | 0 | 0 | 0 | 0 | LINEAR FEET |
| GUARD/GUIDE WALL | 0 | 0 | 0 | 32 | 0 | 0 | LINEAR FEET |
| BOLLARD | 0 | 0 | 0 | 0 | 0 | 0 | LINEAR FEET |
| TEMPORARY BARRIER | 0 | 0 | 0 | 0 | 0 | 0 | LINEAR FEET |
| NON TEMP/BOLLARD | 0 | 0 | 0 | 32 | 0 | 0 | LINEAR FEET |
| INTERSECTION | 14 | 88 | 13 | 19 | 6 | 3 | EACH |
| LOW WATER CROSSING | 0 | 0 | 0 | 0 | 0 | 0 | EACH |
| LOW WATER CROSSING | 0 | 0 | 0 | 0 | 0 | 0 | LINEAR FEET |
| MILE MARKER | 0 | 0 | 0 | 0 | 0 | 0 | EACH |
| OVERPASS | 0 | 0 | 0 | 0 | 0 | 0 | EACH |
| PARK BOUNDARY | 0 | 0 | 0 | 0 | 0 | 0 | EACH |
| PAVED DITCH | 0 | 0 | 0 | 0 | 0 | 0 | LINEAR FEET |
| PULLOUT | 0 | 0 | 0 | 0 | 0 | 0 | EACH |
| PULLOUT | 0 | 0 | 0 | 0 | 0 | 0 | LINEAR FEET |
| RAILROAD CROSSING | 0 | 0 | 0 | 0 | 0 | 0 | EACH |
| RETAINING WALL | 0 | 0 | 0 | 0 | 0 | 0 | EACH |
| RETAINING WALL | 0 | 0 | 0 | 0 | 0 | 0 | LINEAR FEET |
| SIGN | 9 | 39 | 11 | 20 | 3 | 1 | EACH |
| STATE BOUNDARY | 0 | 0 | 0 | 0 | 0 | 0 | EACH |
| TRAFFIC LIGHT | 0 | 0 | 0 | 0 | 0 | 0 | EACH |
| TUNNEL | 0 | 0 | 0 | 0 | 0 | 0 | EACH |
| TUNNEL | 0 | 0 | 0 | 0 | 0 | 0 | LINEAR FEET |

HAVO: DCV ROUTE MAINTENANCE FEATURES SUMMARY

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5.

| FEATURE | ROUTE 0409 RESOURCE MANAGEMENT ROAD | UNIT |
|--------------------|--|-------------|
| BRIDGE | 0 | EACH |
| CATTLE GUARD | 0 | EACH |
| CULVERT | 0 | EACH |
| CURB | 0 | LINEAR FEET |
| DROP INLET | 0 | EACH |
| GATE | 1 | EACH |
| GUARD/GUIDE RAIL | 0 | LINEAR FEET |
| CABLE | 0 | LINEAR FEET |
| NON-CABLE | 0 | LINEAR FEET |
| GUARD/GUIDE WALL | 0 | LINEAR FEET |
| BOLLARD | 0 | LINEAR FEET |
| TEMPORARY BARRIER | 0 | LINEAR FEET |
| NON TEMP/BOLLARD | 0 | LINEAR FEET |
| INTERSECTION | 4 | EACH |
| LOW WATER CROSSING | 0 | EACH |
| LOW WATER CROSSING | 0 | LINEAR FEET |
| MILE MARKER | 0 | EACH |
| OVERPASS | 0 | EACH |
| PARK BOUNDARY | 0 | EACH |
| PAVED DITCH | 0 | LINEAR FEET |
| PULLOUT | 0 | EACH |
| PULLOUT | 0 | LINEAR FEET |
| RAILROAD CROSSING | 0 | EACH |
| RETAINING WALL | 0 | EACH |
| RETAINING WALL | 0 | LINEAR FEET |
| SIGN | 8 | EACH |
| STATE BOUNDARY | 0 | EACH |
| TRAFFIC LIGHT | 0 | EACH |
| TUNNEL | 0 | EACH |
| TUNNEL | 0 | LINEAR FEET |

STRUCTURE LIST

No data available for this section.

Section 9
Route Maintenance Features
Road Logs



Hawaii Volcanoes National Park



Federal Lands Highway
Road Inventory Program

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0010: CRATER RIM DRIVE

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|---------------|-------------|--------------|-------|---|
| 0.000 | 0.000 | ROUTE BEGIN | N/A | FROM ROUTE 5011 (HAWAII STATE ROUTE 11 (HAWAII BELT ROAD / MAMALAHOA HIGHWAY)) AT MP 0.89 ON LEFT |
| 0.000 | 0.000 | INTERSECTION | RIGHT | ROUTE 5011 (HAWAII STATE ROUTE 11 (HAWAII BELT ROAD / MAMALAHOA HIGHWAY)) |
| 0.000 | 0.000 | SIGN | N/A | GUIDE, KAILUA 96 MILES HILO 28 MILES |
| 0.000 | 0.000 | INTERSECTION | LEFT | ROUTE 5011 (HAWAII STATE ROUTE 11 (HAWAII BELT ROAD / MAMALAHOA HIGHWAY)) |
| 0.004 | 0.004 | DROP INLET | RIGHT | N/A |
| 0.005 | 0.005 | SIGN | LEFT | REGULATORY, STOP |
| 0.005 | 0.005 | SIGN | N/A | REGULATORY, LEFT TURN HERE |
| 0.010 | 0.010 | SIGN | N/A | GUIDE, HAWAII VOLCANOES NATIONAL PARK ENTRANCE |
| 0.015 | 0.015 | INTERSECTION | LEFT | ROUTE 0010 (CRATER RIM DRIVE) SPUR |
| 0.015 | 0.015 | INTERSECTION | RIGHT | ROUTE 0010 (CRATER RIM DRIVE) SPUR |
| 0.055 | 0.055 | SIGN | RIGHT | WARNING, GRAPHIC SIGN NO TEXT |
| 0.059 | 0.059 | SIGN | LEFT | GUIDE, KAILUA HILO |
| 0.059 | 0.059 | SIGN | LEFT | WARNING, GRAPHIC SIGN NO TEXT |
| 0.073 | 0.098 | CURB | RIGHT | N/A |
| 0.092 | 0.099 | CURB | N/A | N/A |
| 0.092 | 0.095 | CURB | N/A | N/A |
| 0.093 | 0.093 | SIGN | N/A | GUIDE, VISITORS EMPLOYEE & DELIVERY LANE CREDIT CARDS PREFERRED |
| 0.093 | 0.093 | SIGN | N/A | GUIDE, ENTRANCE FEES CREDIT CARDS PREFERRED |
| 0.095 | 0.095 | SIGN | N/A | REGULATORY, STOP |
| 0.100 | 0.100 | SIGN | LEFT | WARNING, LANE ENDS MERGE LEFT |
| 0.100 | 0.100 | SIGN | RIGHT | REGULATORY, STOP |
| 0.101 | 0.104 | CURB | N/A | N/A |
| 0.102 | 0.122 | CURB | N/A | N/A |
| 0.118 | 0.118 | SIGN | RIGHT | GUIDE, VISITOR CENTER MILITARY CAMP |
| 0.121 | 0.121 | SIGN | LEFT | REGULATORY, YIELD |
| 0.122 | 0.122 | INTERSECTION | LEFT | ROUTE 0010 (CRATER RIM DRIVE) |
| 0.126 | 0.126 | SIGN | RIGHT | WARNING, LANE ENDS MERGE LEFT |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0010: CRATER RIM DRIVE

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|---------------|-------------|--------------|-------|---|
| 0.154 | 0.154 | SIGN | RIGHT | REGULATORY, SPEED LIMIT 15 |
| 0.159 | 0.159 | SIGN | LEFT | GUIDE, HIGHWAY 11 BACKCOUNTRY OFFICE LAVA TUBE |
| 0.161 | 0.161 | SIGN | LEFT | REGULATORY, UNABLE TO READ FROM VIDEO |
| 0.162 | 0.162 | GATE | N/A | N/A |
| 0.162 | 0.162 | DROP INLET | RIGHT | N/A |
| 0.165 | 0.165 | SIGN | RIGHT | REGULATORY, ROAD CLOSED |
| 0.192 | 0.192 | SIGN | LEFT | WARNING, GRAPHIC SIGN NO TEXT |
| 0.222 | 0.222 | SIGN | LEFT | REGULATORY, SPEED LIMIT 15 |
| 0.236 | 0.236 | SIGN | RIGHT | GUIDE, VISITOR CENTER |
| 0.264 | 0.264 | INTERSECTION | LEFT | ROUTE 0401 (NORTH RESIDENCE ROAD) |
| 0.264 | 0.264 | INTERSECTION | RIGHT | ROUTE 0013 (OFFICE AREA STREET) |
| 0.269 | 0.269 | SIGN | RIGHT | WARNING, SPEED HUMP |
| 0.269 | 0.269 | SIGN | RIGHT | WARNING, 10 MPH |
| 0.278 | 0.278 | SIGN | RIGHT | WARNING, AHEAD |
| 0.278 | 0.278 | SIGN | RIGHT | WARNING, GRAPHIC SIGN NO TEXT |
| 0.281 | 0.281 | SIGN | LEFT | GUIDE, VISITOR CENTER |
| 0.284 | 0.284 | SIGN | RIGHT | REGULATORY, STOP FOR PEDESTRIAN IN CROSSWALK |
| 0.292 | 0.292 | SIGN | RIGHT | WARNING, GRAPHIC SIGN NO TEXT |
| 0.292 | 0.292 | SIGN | RIGHT | WARNING, GRAPHIC SIGN NO TEXT |
| 0.295 | 0.307 | CURB | RIGHT | N/A |
| 0.296 | 0.296 | SIGN | LEFT | WARNING, GRAPHIC SIGN NO TEXT |
| 0.296 | 0.296 | SIGN | LEFT | WARNING, GRAPHIC SIGN NO TEXT |
| 0.305 | 0.305 | SIGN | LEFT | REGULATORY, STOP FOR PEDESTRIAN IN CROSSWALK |
| 0.307 | 0.307 | SIGN | RIGHT | GUIDE, VOLCANO HOUSE ENTRANCE |
| 0.311 | 0.311 | SIGN | LEFT | WARNING, AHEAD |
| 0.311 | 0.311 | SIGN | LEFT | WARNING, GRAPHIC SIGN NO TEXT |
| 0.326 | 0.326 | SIGN | LEFT | WARNING, 10 MPH |
| 0.326 | 0.326 | SIGN | LEFT | WARNING, SPEED HUMP |
| 0.330 | 0.330 | INTERSECTION | RIGHT | ROUTE 0900AZ (KILAUEA VISITORS CENTER PARKING AREA A) |
| 0.337 | 0.337 | SIGN | LEFT | REGULATORY, SPEED LIMIT 15 |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0010: CRATER RIM DRIVE

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|---------------|-------------|------------------|-------|--|
| 0.347 | 0.347 | SIGN | LEFT | REGULATORY, ONE WAY |
| 0.356 | 0.356 | INTERSECTION | LEFT | ROUTE 0904 (VOLCANO HOUSE PARKING) |
| 0.358 | 0.358 | INTERSECTION | RIGHT | ROUTE 0400 (WATER TANK ROAD) |
| 0.359 | 0.359 | SIGN | LEFT | REGULATORY, ONE WAY |
| 0.364 | 0.364 | SIGN | RIGHT | REGULATORY, NO PARKING THIS SIDE OF STREET |
| 0.380 | 0.380 | SIGN | RIGHT | WARNING, GRAPHIC SIGN NO TEXT |
| 0.380 | 0.380 | SIGN | LEFT | GUIDE, VOLCANO HOUSE ENTRANCE |
| 0.381 | 0.391 | RETAINING WALL | RIGHT | N/A |
| 0.392 | 0.429 | PAVED DITCH | RIGHT | N/A |
| 0.412 | 0.416 | GUARD/GUIDE WALL | LEFT | N/A |
| 0.425 | 0.482 | GUARD/GUIDE WALL | LEFT | N/A |
| 0.487 | 0.487 | SIGN | RIGHT | WARNING, GRAPHIC SIGN NO TEXT |
| 0.487 | 0.487 | SIGN | RIGHT | WARNING, SHARE THE ROAD |
| 0.507 | 0.507 | SIGN | LEFT | REGULATORY, SPEED LIMIT 15 |
| 0.508 | 0.508 | SIGN | RIGHT | REGULATORY, SPEED LIMIT 25 |
| 0.556 | 0.556 | SIGN | LEFT | WARNING, 15 MPH SPEED ZONE AHEAD |
| 0.805 | 0.805 | SIGN | RIGHT | WARNING, GRAPHIC SIGN NO TEXT |
| 0.805 | 0.805 | SIGN | RIGHT | WARNING, AHEAD |
| 0.844 | 0.844 | SIGN | LEFT | GUIDE, UNABLE TO READ FROM VIDEO |
| 0.846 | 0.846 | SIGN | RIGHT | GUIDE, UNABLE TO READ FROM VIDEO |
| 0.860 | 0.860 | SIGN | RIGHT | REGULATORY, NO PARKING THIS SIDE OF STREET |
| 0.898 | 0.898 | SIGN | LEFT | WARNING, GRAPHIC SIGN NO TEXT |
| 0.898 | 0.898 | SIGN | LEFT | WARNING, AHEAD |
| 0.939 | 0.939 | SIGN | LEFT | REGULATORY, ONE WAY |
| 0.941 | 0.941 | SIGN | LEFT | REGULATORY, DO NOT ENTER |
| 0.949 | 0.949 | INTERSECTION | LEFT | ROUTE 0211 (STEAM VENTS ROAD) |
| 0.954 | 0.954 | SIGN | LEFT | REGULATORY, DO NOT ENTER |
| 0.954 | 0.954 | SIGN | LEFT | REGULATORY, ONE WAY |
| 0.966 | 0.966 | SIGN | LEFT | WARNING, AHEAD |
| 0.966 | 0.966 | SIGN | LEFT | WARNING, GRAPHIC SIGN NO TEXT |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0010: CRATER RIM DRIVE

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|---------------|-------------|------------------|-------|---|
| 0.969 | 0.969 | SIGN | RIGHT | GUIDE, 400 FEET |
| 0.969 | 0.969 | SIGN | RIGHT | GUIDE, STEAM VENTS |
| 1.046 | 1.046 | SIGN | LEFT | REGULATORY, ONE WAY |
| 1.047 | 1.047 | SIGN | RIGHT | GUIDE, STEAM VENTS PARKING |
| 1.056 | 1.056 | INTERSECTION | LEFT | ROUTE 0211 (STEAM VENTS ROAD) |
| 1.100 | 1.100 | SIGN | LEFT | GUIDE, STEAM VENTS |
| 1.148 | 1.148 | SIGN | RIGHT | REGULATORY, SPEED LIMIT 35 |
| 1.151 | 1.151 | SIGN | LEFT | REGULATORY, SPEED LIMIT 25 |
| 1.156 | 1.156 | SIGN | RIGHT | WARNING, GRAPHIC SIGN NO TEXT |
| 1.156 | 1.156 | SIGN | RIGHT | WARNING, SHARE THE ROAD |
| 1.188 | 1.188 | SIGN | RIGHT | GUIDE, KILAUEA THEATER |
| 1.227 | 1.227 | SIGN | RIGHT | WARNING, GRAPHIC SIGN NO TEXT |
| 1.236 | 1.236 | SIGN | RIGHT | WARNING, AHEAD |
| 1.236 | 1.236 | SIGN | RIGHT | WARNING, GRAPHIC SIGN NO TEXT |
| 1.272 | 1.272 | INTERSECTION | RIGHT | ROUTE 0215DZ (KILAUEA MILITARY CAMP ROAD D) |
| 1.292 | 1.292 | SIGN | LEFT | WARNING, GRAPHIC SIGN NO TEXT |
| 1.292 | 1.292 | SIGN | LEFT | WARNING, AHEAD |
| 1.305 | 1.305 | SIGN | LEFT | GUIDE, KILAUEA THEATER |
| 1.318 | 1.321 | GUARD/GUIDE RAIL | RIGHT | N/A |
| 1.322 | 1.363 | GUARD/GUIDE WALL | RIGHT | N/A |
| 1.326 | 1.326 | SIGN | LEFT | WARNING, UNABLE TO READ FROM VIDEO |
| 1.326 | 1.329 | GUARD/GUIDE RAIL | LEFT | N/A |
| 1.362 | 1.362 | SIGN | RIGHT | GUIDE, KILAUEA MILITARY CAMP ELEVATION 4000 |
| 1.370 | 1.370 | INTERSECTION | RIGHT | ROUTE 0215CZ (KILAUEA MILITARY CAMP ROAD C) |
| 1.376 | 1.410 | GUARD/GUIDE WALL | RIGHT | N/A |
| 1.380 | 1.380 | SIGN | RIGHT | WARNING, GRAPHIC SIGN NO TEXT |
| 1.380 | 1.380 | SIGN | RIGHT | WARNING, AHEAD |
| 1.412 | 1.445 | GUARD/GUIDE WALL | RIGHT | N/A |
| 1.439 | 1.439 | SIGN | LEFT | WARNING, AHEAD |
| 1.439 | 1.439 | SIGN | LEFT | WARNING, GRAPHIC SIGN NO TEXT |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0010: CRATER RIM DRIVE

NOTE: Features were not collected along Route 0010 from mile posts 2.83 to 7.54 because that portion of the road was inaccessible due to hazardous volcanic gas conditions.

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|---------------|-------------|------------------|-------|---|
| 1.454 | 1.454 | INTERSECTION | RIGHT | ROUTE 0215CZ (KILAUEA MILITARY CAMP ROAD C) |
| 1.458 | 1.458 | SIGN | RIGHT | GUIDE, UNABLE TO READ FROM VIDEO |
| 1.459 | 1.483 | GUARD/GUIDE WALL | RIGHT | N/A |
| 1.490 | 1.490 | INTERSECTION | RIGHT | ROUTE 0214 (KILAUEA MILITARY CAMP ROAD) |
| 1.542 | 1.542 | SIGN | LEFT | WARNING, GRAPHIC SIGN NO TEXT |
| 1.594 | 1.594 | SIGN | RIGHT | GUIDE, JAGGAR MUSEUM 1.2 |
| 1.692 | 1.692 | SIGN | RIGHT | REGULATORY, SPEED LIMIT 35 |
| 2.023 | 2.023 | SIGN | LEFT | REGULATORY, SPEED LIMIT 35 |
| 2.042 | 2.042 | SIGN | RIGHT | GUIDE, SERVICE ROAD EMPLOYEES ONLY |
| 2.046 | 2.046 | INTERSECTION | RIGHT | ROUTE 0417 (MAUNA LOA EMERGENCY ACCESS ROAD) |
| 2.054 | 2.054 | GATE | N/A | N/A |
| 2.056 | 2.056 | SIGN | RIGHT | REGULATORY, ROAD CLOSED |
| 2.108 | 2.108 | SIGN | RIGHT | REGULATORY, SPEED LIMIT 35 |
| 2.336 | 2.336 | SIGN | RIGHT | GUIDE, KILAUEA |
| 2.380 | 2.380 | INTERSECTION | LEFT | ROUTE 0201 (KILAUEA OVERLOOK ROAD) |
| 2.414 | 2.414 | SIGN | LEFT | GUIDE, KILAUEA |
| 2.647 | 2.647 | SIGN | RIGHT | WARNING, ROAD ENDS 1000' AHEAD |
| 2.702 | 2.702 | SIGN | LEFT | WARNING, GRAPHIC SIGN NO TEXT |
| 2.702 | 2.702 | SIGN | LEFT | WARNING, SHARE THE ROAD |
| 2.717 | 2.717 | SIGN | LEFT | REGULATORY, SPEED LIMIT 35 |
| 2.724 | 2.724 | SIGN | RIGHT | WARNING, AHEAD |
| 2.724 | 2.724 | SIGN | RIGHT | WARNING, GRAPHIC SIGN NO TEXT |
| 2.745 | 2.745 | CULVERT | N/A | N/A |
| 2.750 | 2.750 | SIGN | RIGHT | GUIDE, JAGGAR MUSEUM |
| 2.784 | 2.784 | INTERSECTION | LEFT | ROUTE 0911 (VOLCANO OBSERVATORY PARKING) |
| 2.807 | 2.807 | SIGN | LEFT | WARNING, AHEAD |
| 2.807 | 2.807 | SIGN | LEFT | WARNING, GRAPHIC SIGN NO TEXT |
| 2.832 | 2.832 | INTERSECTION | LEFT | ROUTE 0911 (VOLCANO OBSERVATORY PARKING) |
| 2.834 | 2.834 | INTERSECTION | N/A | ROUTE 0010 (CRATER RIM DRIVE) BEGIN UNCOLLECTED SECTION |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0010: CRATER RIM DRIVE

NOTE: Features were not collected along Route 0010 from mile posts 2.83 to 7.54 because that portion of the road was inaccessible due to hazardous volcanic gas conditions.

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|---------------|-------------|------------------|-------|---|
| 7.540 | 7.540 | INTERSECTION | N/A | ROUTE 0010 (CRATER RIM DRIVE) END UNCOLLECTED SECTION |
| 7.554 | 7.554 | INTERSECTION | LEFT | ROUTE 0913 (DEVASTATION TRAIL PARKING) |
| 7.556 | 7.556 | INTERSECTION | RIGHT | ROUTE 0012 (CHAIN OF CRATERS ROAD) |
| 7.582 | 7.582 | SIGN | LEFT | GUIDE, CHAIN OF CRATERS RD DEVASTATION TRAIL |
| 7.582 | 7.582 | SIGN | LEFT | GUIDE, UNABLE TO READ FROM VIDEO |
| 7.609 | 7.609 | SIGN | RIGHT | REGULATORY, SPEED LIMIT 25 |
| 7.609 | 7.609 | SIGN | LEFT | WARNING, GRAPHIC SIGN NO TEXT |
| 7.641 | 7.641 | SIGN | LEFT | WARNING, CAUTION ROAD CLOSED AHEAD |
| 7.817 | 7.817 | SIGN | RIGHT | GUIDE, PU'U PUA'I |
| 7.868 | 7.868 | INTERSECTION | LEFT | ROUTE 0209 (PUU PUA'I OVERLOOK ROAD) |
| 7.902 | 7.902 | SIGN | LEFT | GUIDE, PU'U PUA'I |
| 7.912 | 7.912 | SIGN | RIGHT | WARNING, GRAPHIC SIGN NO TEXT |
| 7.912 | 7.912 | SIGN | RIGHT | WARNING, NEXT 2 MILES |
| 8.811 | 8.811 | SIGN | RIGHT | REGULATORY, REDUCED SPEED AHEAD |
| 8.861 | 8.861 | SIGN | LEFT | REGULATORY, SPEED LIMIT 25 |
| 8.862 | 8.862 | SIGN | RIGHT | REGULATORY, SPEED LIMIT 15 |
| 8.871 | 8.914 | GUARD/GUIDE WALL | LEFT | N/A |
| 8.926 | 8.926 | SIGN | RIGHT | WARNING, GRAPHIC SIGN NO TEXT |
| 8.931 | 8.931 | SIGN | LEFT | REGULATORY, NO PARKING THIS SIDE OF STREET |
| 8.931 | 8.931 | SIGN | LEFT | WARNING, GRAPHIC SIGN NO TEXT |
| 8.940 | 8.940 | GATE | N/A | N/A |
| 8.941 | 8.941 | SIGN | LEFT | REGULATORY, GRAPHIC SIGN NO TEXT |
| 8.946 | 8.946 | SIGN | RIGHT | GUIDE, BUSES ONLY |
| 8.995 | 8.995 | INTERSECTION | RIGHT | ROUTE 0915AZ (THURSTON LAVA TUBE BUS PARKING AREA A) |
| 9.005 | 9.005 | INTERSECTION | LEFT | ROUTE 0915BZ (THURSTON LAVA TUBE PARKING AREA B) |
| 9.015 | 9.036 | CURB | RIGHT | N/A |
| 9.015 | 9.036 | GUARD/GUIDE WALL | RIGHT | N/A |
| 9.017 | 9.017 | SIGN | RIGHT | GUIDE, OVERFLOW PARKING AT KILAUEA IKI |
| 9.031 | 9.031 | SIGN | RIGHT | WARNING, GRAPHIC SIGN NO TEXT |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0010: CRATER RIM DRIVE

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|------------------|----------------|--------------|-------|--|
| 9.031 | 9.037 | CURB | LEFT | N/A |
| 9.054 | 9.054 | SIGN | RIGHT | REGULATORY, SPEED LIMIT 25 |
| 9.079 | 9.079 | SIGN | LEFT | WARNING, GRAPHIC SIGN NO TEXT |
| 9.120 | 9.120 | SIGN | LEFT | REGULATORY, SPEED LIMIT 15 |
| 9.169 | 9.169 | SIGN | LEFT | REGULATORY, REDUCED SPEED AHEAD |
| 9.278 | 9.278 | SIGN | RIGHT | GUIDE, KILAUEA IKI |
| 9.306 | 9.306 | INTERSECTION | LEFT | ROUTE 0916 (KILAUEA IKI PARKING) |
| 9.310 | 9.311 | CURB | LEFT | N/A |
| 9.365 | 9.369 | CURB | LEFT | N/A |
| 9.372 | 9.372 | INTERSECTION | LEFT | ROUTE 0916 (KILAUEA IKI PARKING) |
| 9.376 | 9.378 | CURB | LEFT | N/A |
| 9.413 | 9.413 | SIGN | LEFT | GUIDE, KILAUEA IKI |
| 9.574 | 9.574 | INTERSECTION | RIGHT | UNPAVED ROUTE |
| 9.616 | 9.616 | CULVERT | N/A | N/A |
| 9.808 | 9.808 | SIGN | LEFT | WARNING, GRAPHIC SIGN NO TEXT |
| 9.808 | 9.808 | SIGN | LEFT | WARNING, NEXT 2 MILES |
| 10.008 | 10.008 | SIGN | RIGHT | WARNING, GRAPHIC SIGN NO TEXT |
| 10.008 | 10.008 | SIGN | RIGHT | WARNING, 10 MPH |
| 10.095 | 10.095 | INTERSECTION | LEFT | ROUTE 0409 (RESOURCE MANAGEMENT ROAD) |
| 10.103 | 10.103 | SIGN | N/A | GUIDE, LAVA TUBE |
| 10.106 | 10.106 | SIGN | LEFT | REGULATORY, STOP |
| 10.114 | 10.114 | SIGN | N/A | GUIDE, RESEARCH OFFICE HIGHWAY 11 VISITOR CENTER |
| 10.125 | 10.125 | SIGN | RIGHT | REGULATORY, SPEED LIMIT 25 |
| 10.133 | 10.133 | SIGN | LEFT | WARNING, GRAPHIC SIGN NO TEXT |
| 10.175 | 10.175 | SIGN | LEFT | WARNING, GRAPHIC SIGN NO TEXT |
| 10.452 | 10.452 | SIGN | LEFT | REGULATORY, GRAPHIC SIGN NO TEXT |
| 10.453 | 10.453 | GATE | N/A | N/A |
| 10.454 | 10.454 | SIGN | RIGHT | REGULATORY, GRAPHIC SIGN NO TEXT |
| 10.466 | 10.466 | INTERSECTION | LEFT | ROUTE 0401 (NORTH RESIDENCE ROAD) |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0010: CRATER RIM DRIVE

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|--------------------------|------------------------|----------------|-------------|---|
| 10.493 | 10.493 | SIGN | LEFT | GUIDE, LAVA TUBE CHAIN OF CRATERS RD BACKCOUNTRY OFFICE |
| 10.527 | 10.527 | SIGN | RIGHT | WARNING, GRAPHIC SIGN NO TEXT |
| 10.543 | 10.543 | SIGN | LEFT | REGULATORY, SPEED LIMIT 25 |
| 10.550 | 10.550 | SIGN | RIGHT | GUIDE, VISITOR CENTER HIGHWAY 11 |
| 10.584 | 10.584 | INTERSECTION | RIGHT | ROUTE 0010 (CRATER RIM DRIVE) SPUR |
| 10.590 | 10.590 | SIGN | RIGHT | REGULATORY, YIELD |
| 10.592 | 10.592 | SIGN | N/A | REGULATORY, STOP |
| 10.592 | 10.592 | INTERSECTION | LEFT | ROUTE 0010 (CRATER RIM DRIVE) SPUR |
| 10.596 | 10.596 | INTERSECTION | LEFT | ROUTE 0010 (CRATER RIM DRIVE) |
| 10.596 | 10.596 | INTERSECTION | RIGHT | ROUTE 0010 (CRATER RIM DRIVE) |
| 10.596 | 10.596 | SIGN | RIGHT | GUIDE, VISITOR CENTER JAGGAR MUSEUM HIGHWAY 11 |
| 10.596 | 10.596 | ROUTE END | N/A | TO END OF LOOP |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0012: CHAIN OF CRATERS ROAD

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|---------------|-------------|------------------|-------|--|
| 0.000 | 0.000 | ROUTE BEGIN | N/A | FROM ROUTE 0010 (CRATER RIM DRIVE) AT MP 7.56 ON RIGHT |
| 0.000 | 0.000 | INTERSECTION | LEFT | ROUTE 0010 (CRATER RIM DRIVE) |
| 0.000 | 0.000 | SIGN | N/A | GUIDE, JAGGAR MUSEUM LAVA TUBE HIGHWAY 11 |
| 0.000 | 0.000 | INTERSECTION | N/A | ROUTE 0913 (DEVASTATION TRAIL PARKING) |
| 0.000 | 0.000 | INTERSECTION | RIGHT | ROUTE 0010 (CRATER RIM DRIVE) |
| 0.005 | 0.005 | SIGN | LEFT | REGULATORY, STOP |
| 0.020 | 0.020 | SIGN | LEFT | REGULATORY, GRAPHIC SIGN NO TEXT |
| 0.021 | 0.021 | SIGN | LEFT | REGULATORY, ROAD CLOSED |
| 0.021 | 0.021 | GATE | N/A | N/A |
| 0.022 | 0.022 | SIGN | LEFT | REGULATORY, GRAPHIC SIGN NO TEXT |
| 0.023 | 0.023 | SIGN | RIGHT | REGULATORY, GRAPHIC SIGN NO TEXT |
| 0.024 | 0.024 | SIGN | RIGHT | REGULATORY, ROAD CLOSED |
| 0.025 | 0.025 | SIGN | RIGHT | REGULATORY, GRAPHIC SIGN NO TEXT |
| 0.030 | 0.030 | SIGN | RIGHT | WARNING, ROAD ENDS 20 MILES AHEAD NO SERVICES |
| 0.050 | 0.050 | SIGN | RIGHT | REGULATORY, SPEED LIMIT 35 |
| 0.058 | 0.058 | SIGN | LEFT | WARNING, GRAPHIC SIGN NO TEXT |
| 0.148 | 0.148 | SIGN | LEFT | WARNING, GRAPHIC SIGN NO TEXT |
| 0.158 | 0.158 | SIGN | RIGHT | WARNING, GRAPHIC SIGN NO TEXT |
| 0.199 | 0.199 | SIGN | LEFT | GUIDE, UNABLE TO READ FROM VIDEO |
| 0.259 | 0.259 | SIGN | LEFT | WARNING, GRAPHIC SIGN NO TEXT |
| 0.348 | 0.348 | SIGN | RIGHT | GUIDE, JULY 1974 LAVA FLOW |
| 0.410 | 0.430 | CURB | RIGHT | N/A |
| 0.431 | 0.473 | GUARD/GUIDE WALL | RIGHT | N/A |
| 0.436 | 0.436 | SIGN | RIGHT | GUIDE, UNABLE TO READ FROM VIDEO |
| 0.547 | 0.547 | SIGN | LEFT | REGULATORY, SPEED LIMIT 35 |
| 0.547 | 0.547 | SIGN | RIGHT | REGULATORY, SPEED LIMIT 45 |
| 0.620 | 0.620 | SIGN | LEFT | REGULATORY, REDUCED SPEED AHEAD |
| 0.948 | 0.948 | SIGN | RIGHT | GUIDE, PUHIMAU CRATER |
| 0.970 | 0.970 | INTERSECTION | LEFT | ROUTE 0918 (PUHIMAU CRATER PARKING) |
| 1.012 | 1.012 | INTERSECTION | LEFT | ROUTE 0918 (PUHIMAU CRATER PARKING) |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0012: CHAIN OF CRATERS ROAD

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|---------------|-------------|--------------|-------|---------------------------------------|
| 1.045 | 1.045 | SIGN | LEFT | GUIDE, PUHIMAU CRATER |
| 1.282 | 1.282 | SIGN | RIGHT | WARNING, CATTLE GUARD |
| 1.322 | 1.322 | INTERSECTION | RIGHT | UNPAVED ROUTE |
| 1.330 | 1.330 | SIGN | RIGHT | WARNING, GRAPHIC SIGN NO TEXT |
| 1.332 | 1.332 | CATTLE GUARD | N/A | N/A |
| 1.333 | 1.333 | SIGN | LEFT | WARNING, GRAPHIC SIGN NO TEXT |
| 1.333 | 1.333 | SIGN | RIGHT | WARNING, GRAPHIC SIGN NO TEXT |
| 1.335 | 1.335 | SIGN | LEFT | WARNING, GRAPHIC SIGN NO TEXT |
| 1.380 | 1.380 | SIGN | LEFT | WARNING, CATTLE GUARD |
| 1.510 | 1.510 | SIGN | RIGHT | GUIDE, KO'OKO'OLAU CRATER |
| 1.512 | 1.542 | PULLOUT | RIGHT | N/A |
| 1.517 | 1.533 | CURB | RIGHT | N/A |
| 1.534 | 1.539 | CURB | RIGHT | N/A |
| 1.545 | 1.545 | SIGN | LEFT | GUIDE, KO'OKO'OLAU CRATER |
| 2.106 | 2.106 | SIGN | RIGHT | WARNING, GRAPHIC SIGN NO TEXT |
| 2.167 | 2.167 | SIGN | RIGHT | GUIDE, HILINA PALI ROAD |
| 2.202 | 2.202 | INTERSECTION | RIGHT | ROUTE 0101 (HILINA PALI ROAD) |
| 2.225 | 2.225 | SIGN | LEFT | REGULATORY, UNABLE TO READ FROM VIDEO |
| 2.226 | 2.226 | SIGN | LEFT | REGULATORY, UNABLE TO READ FROM VIDEO |
| 2.227 | 2.227 | GATE | N/A | N/A |
| 2.228 | 2.228 | SIGN | RIGHT | REGULATORY, UNABLE TO READ FROM VIDEO |
| 2.229 | 2.229 | SIGN | RIGHT | REGULATORY, UNABLE TO READ FROM VIDEO |
| 2.248 | 2.248 | SIGN | LEFT | GUIDE, HILINA PALI ROAD |
| 2.293 | 2.293 | SIGN | LEFT | WARNING, GRAPHIC SIGN NO TEXT |
| 2.349 | 2.389 | PULLOUT | RIGHT | N/A |
| 2.356 | 2.381 | CURB | RIGHT | N/A |
| 2.577 | 2.609 | PULLOUT | RIGHT | N/A |
| 2.581 | 2.605 | CURB | RIGHT | N/A |
| 2.615 | 2.615 | SIGN | RIGHT | GUIDE, MAY 1973 LAVA FLOW |
| 2.626 | 2.626 | SIGN | LEFT | GUIDE, HRIAKA CRATER |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0012: CHAIN OF CRATERS ROAD

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|---------------|-------------|--------------|-------|------------------------------------|
| 2.963 | 2.963 | MILE MARKER | RIGHT | N/A |
| 3.035 | 3.035 | SIGN | RIGHT | REGULATORY, REDUCED SPEED AHEAD |
| 3.106 | 3.106 | SIGN | LEFT | REGULATORY, SPEED LIMIT 45 |
| 3.106 | 3.106 | SIGN | RIGHT | REGULATORY, SPEED LIMIT 35 |
| 3.146 | 3.146 | SIGN | RIGHT | GUIDE, PAUABI CRATER |
| 3.178 | 3.181 | CURB | LEFT | N/A |
| 3.184 | 3.184 | INTERSECTION | LEFT | ROUTE 0919 (PAUABI CRATER PARKING) |
| 3.189 | 3.191 | CURB | LEFT | N/A |
| 3.215 | 3.215 | SIGN | RIGHT | GUIDE, NOV. 1979 LAVA FLOW |
| 3.232 | 3.234 | CURB | LEFT | N/A |
| 3.240 | 3.240 | INTERSECTION | LEFT | ROUTE 0919 (PAUABI CRATER PARKING) |
| 3.243 | 3.246 | CURB | LEFT | N/A |
| 3.262 | 3.262 | GATE | N/A | N/A |
| 3.264 | 3.264 | SIGN | LEFT | GUIDE, PAUABI CRATER |
| 3.543 | 3.543 | SIGN | RIGHT | WARNING, GRAPHIC SIGN NO TEXT |
| 3.582 | 3.582 | SIGN | RIGHT | GUIDE, MAUNA ULU |
| 3.645 | 3.645 | INTERSECTION | LEFT | ROUTE 0208 (MAUNA ULU ACCESS ROAD) |
| 3.694 | 3.694 | SIGN | LEFT | GUIDE, MAUNA ULU |
| 3.723 | 3.723 | SIGN | LEFT | REGULATORY, SPEED LIMIT 35 |
| 3.723 | 3.723 | SIGN | RIGHT | REGULATORY, SPEED LIMIT 45 |
| 3.786 | 3.786 | SIGN | LEFT | REGULATORY, REDUCED SPEED AHEAD |
| 3.969 | 4.077 | PULLOUT | RIGHT | N/A |
| 3.971 | 4.073 | PULLOUT | LEFT | N/A |
| 3.975 | 4.068 | CURB | LEFT | N/A |
| 3.976 | 4.068 | CURB | RIGHT | N/A |
| 4.081 | 4.081 | GATE | N/A | N/A |
| 4.083 | 4.083 | SIGN | RIGHT | REGULATORY, ROAD CLOSED |
| 4.176 | 4.176 | SIGN | RIGHT | WARNING, GRAPHIC SIGN NO TEXT |
| 4.290 | 4.290 | INTERSECTION | RIGHT | ROUTE 0405 (AINAHOU ROAD) |
| 4.393 | 4.393 | SIGN | LEFT | WARNING, GRAPHIC SIGN NO TEXT |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0012: CHAIN OF CRATERS ROAD

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|---------------|-------------|--------------|-------|---|
| 4.920 | 4.920 | MILE MARKER | RIGHT | N/A |
| 5.230 | 5.230 | SIGN | RIGHT | WARNING, 25 MPH |
| 5.230 | 5.230 | SIGN | RIGHT | WARNING, GRAPHIC SIGN NO TEXT |
| 5.402 | 5.402 | SIGN | RIGHT | GUIDE, KIPUKA KAHALI'I |
| 5.434 | 5.539 | PULLOUT | LEFT | N/A |
| 5.435 | 5.536 | PULLOUT | RIGHT | N/A |
| 5.439 | 5.533 | CURB | LEFT | N/A |
| 5.440 | 5.533 | CURB | RIGHT | N/A |
| 5.556 | 5.556 | SIGN | LEFT | GUIDE, KIPUKA KAHALI'I |
| 5.583 | 5.583 | SIGN | RIGHT | WARNING, GRAPHIC SIGN NO TEXT |
| 5.583 | 5.583 | SIGN | RIGHT | WARNING, 25 MPH |
| 5.854 | 5.854 | SIGN | LEFT | WARNING, 25 MPH |
| 5.854 | 5.854 | SIGN | LEFT | WARNING, GRAPHIC SIGN NO TEXT |
| 5.905 | 5.905 | MILE MARKER | LEFT | N/A |
| 6.244 | 6.244 | SIGN | RIGHT | GUIDE, MAU LOA O MAUNA ULU |
| 6.257 | 6.257 | SIGN | LEFT | WARNING, 25 MPH |
| 6.257 | 6.257 | SIGN | LEFT | WARNING, GRAPHIC SIGN NO TEXT |
| 6.258 | 6.377 | PULLOUT | RIGHT | N/A |
| 6.270 | 6.381 | CURB | RIGHT | N/A |
| 6.302 | 6.402 | PULLOUT | LEFT | N/A |
| 6.303 | 6.402 | CURB | LEFT | N/A |
| 6.423 | 6.423 | SIGN | LEFT | GUIDE, MAU LOA O MAUNA ULU |
| 6.889 | 6.889 | MILE MARKER | RIGHT | N/A |
| 7.294 | 7.294 | SIGN | RIGHT | GUIDE, MULIWAI A PELE |
| 7.392 | 7.392 | INTERSECTION | RIGHT | ROUTE 0939 (MULAWAI A PELE TRAILHEAD PARKING) |
| 7.481 | 7.481 | SIGN | LEFT | GUIDE, MULIWAI A PELE |
| 8.842 | 8.842 | MILE MARKER | RIGHT | N/A |
| 9.169 | 9.169 | SIGN | RIGHT | REGULATORY, BRAKE CHECK AHEAD |
| 9.333 | 9.458 | PULLOUT | RIGHT | N/A |
| 9.341 | 9.460 | CURB | RIGHT | N/A |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0012: CHAIN OF CRATERS ROAD

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|---------------|-------------|------------------|-------|--|
| 9.676 | 9.676 | SIGN | RIGHT | GUIDE, KEALAKOMO |
| 9.682 | 9.682 | SIGN | LEFT | REGULATORY, SPEED LIMIT 45 |
| 9.737 | 9.737 | SIGN | LEFT | GUIDE, UNABLE TO READ FROM VIDEO |
| 9.738 | 9.738 | INTERSECTION | RIGHT | ROUTE 0921 (KEALAKOMO PICNIC AREA PARKING) |
| 9.804 | 9.804 | INTERSECTION | RIGHT | ROUTE 0921 (KEALAKOMO PICNIC AREA PARKING) |
| 9.814 | 9.814 | SIGN | RIGHT | REGULATORY, UNABLE TO READ FROM VIDEO |
| 9.815 | 9.815 | SIGN | LEFT | REGULATORY, UNABLE TO READ FROM VIDEO |
| 9.815 | 9.815 | SIGN | RIGHT | REGULATORY, UNABLE TO READ FROM VIDEO |
| 9.816 | 9.816 | GATE | N/A | N/A |
| 9.887 | 9.887 | SIGN | LEFT | GUIDE, KEALAKOMO |
| 10.226 | 10.364 | GUARD/GUIDE RAIL | RIGHT | N/A |
| 10.366 | 10.366 | SIGN | RIGHT | GUIDE, HALONA KAHAKAI |
| 10.376 | 10.491 | PULLOUT | RIGHT | N/A |
| 10.383 | 10.479 | CURB | RIGHT | N/A |
| 10.519 | 10.519 | SIGN | LEFT | GUIDE, HALONA KAHAKAI |
| 10.837 | 10.837 | MILE MARKER | RIGHT | N/A |
| 10.877 | 10.928 | GUARD/GUIDE RAIL | RIGHT | N/A |
| 11.159 | 11.206 | PULLOUT | LEFT | N/A |
| 11.646 | 11.646 | SIGN | RIGHT | WARNING, GRAPHIC SIGN NO TEXT |
| 11.646 | 11.646 | SIGN | RIGHT | WARNING, 30 MPH |
| 12.044 | 12.139 | PULLOUT | LEFT | N/A |
| 12.055 | 12.138 | CURB | LEFT | N/A |
| 12.139 | 12.288 | GUARD/GUIDE RAIL | LEFT | N/A |
| 12.323 | 12.323 | SIGN | LEFT | WARNING, 30 MPH |
| 12.323 | 12.323 | SIGN | LEFT | WARNING, GRAPHIC SIGN NO TEXT |
| 12.809 | 12.809 | MILE MARKER | RIGHT | N/A |
| 13.049 | 13.126 | GUARD/GUIDE RAIL | LEFT | N/A |
| 13.163 | 13.374 | GUARD/GUIDE RAIL | LEFT | N/A |
| 13.301 | 13.350 | PULLOUT | RIGHT | N/A |
| 13.393 | 13.438 | GUARD/GUIDE RAIL | LEFT | N/A |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0012: CHAIN OF CRATERS ROAD

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|------------------|----------------|--------------|-------|---|
| 13.757 | 13.757 | MILE MARKER | LEFT | N/A |
| 13.843 | 13.843 | SIGN | RIGHT | GUIDE, ALANUI KAHIKO |
| 13.863 | 13.989 | PULLOUT | LEFT | N/A |
| 13.865 | 13.976 | CURB | LEFT | N/A |
| 13.994 | 13.994 | SIGN | LEFT | GUIDE, ALANUI KAHIKO |
| 14.534 | 14.534 | SIGN | RIGHT | GUIDE, HOLEI PALI |
| 14.562 | 14.673 | PULLOUT | RIGHT | N/A |
| 14.565 | 14.676 | PULLOUT | LEFT | N/A |
| 14.566 | 14.674 | CURB | RIGHT | N/A |
| 14.567 | 14.672 | CURB | LEFT | N/A |
| 14.711 | 14.711 | SIGN | LEFT | GUIDE, HOLEI PALI |
| 14.743 | 14.743 | MILE MARKER | RIGHT | N/A |
| 15.103 | 15.154 | PULLOUT | LEFT | N/A |
| 15.106 | 15.154 | CURB | LEFT | N/A |
| 15.729 | 15.729 | MILE MARKER | LEFT | N/A |
| 15.785 | 15.785 | SIGN | LEFT | REGULATORY, SPEED LIMIT 45 |
| 15.788 | 15.788 | SIGN | RIGHT | REGULATORY, REDUCED SPEED AHEAD |
| 15.828 | 15.828 | SIGN | RIGHT | REGULATORY, SPEED LIMIT 35 |
| 15.970 | 15.970 | SIGN | RIGHT | GUIDE, ENTERING TSUNAMI EVACUATION AREA |
| 16.027 | 16.027 | SIGN | RIGHT | GUIDE, PU'U LOA PETROGLYPHS |
| 16.103 | 16.154 | PULLOUT | LEFT | N/A |
| 16.104 | 16.152 | CURB | LEFT | N/A |
| 16.118 | 16.118 | SIGN | LEFT | GUIDE, CALL BOX |
| 16.130 | 16.130 | INTERSECTION | RIGHT | ROUTE 0929 (APUA POINT PARKING) |
| 16.155 | 16.155 | GATE | N/A | N/A |
| 16.191 | 16.191 | SIGN | LEFT | GUIDE, PU'U LOA PETROGLYPHS |
| 16.234 | 16.234 | INTERSECTION | LEFT | ROUTE 0936 (PU'U LOA PETROGLYPHS PARKING) |
| 16.367 | 16.367 | SIGN | LEFT | GUIDE, EMERGENCY 911 CALLS ONLY 1/4 MILE |
| 16.397 | 16.397 | SIGN | RIGHT | REGULATORY, SPEED LIMIT 35 |
| 16.720 | 16.720 | MILE MARKER | RIGHT | N/A |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0012: CHAIN OF CRATERS ROAD

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|--------------------------|------------------------|----------------|-------------|---|
| 17.103 | 17.149 | PULLOUT | RIGHT | N/A |
| 17.103 | 17.129 | CURB | RIGHT | N/A |
| 17.129 | 17.129 | SIGN | RIGHT | GUIDE, UNABLE TO READ FROM VIDEO |
| 17.131 | 17.149 | CURB | RIGHT | N/A |
| 17.311 | 17.370 | PULLOUT | RIGHT | N/A |
| 17.327 | 17.351 | CURB | RIGHT | N/A |
| 17.330 | 17.330 | SIGN | RIGHT | REGULATORY, UNABLE TO READ FROM VIDEO |
| 17.330 | 17.330 | SIGN | RIGHT | GUIDE, UNABLE TO READ FROM VIDEO |
| 17.684 | 17.684 | MILE MARKER | LEFT | N/A |
| 17.824 | 17.876 | PULLOUT | RIGHT | N/A |
| 17.825 | 17.876 | CURB | RIGHT | N/A |
| 17.860 | 17.860 | SIGN | RIGHT | GUIDE, UNABLE TO READ FROM VIDEO |
| 18.124 | 18.124 | SIGN | RIGHT | REGULATORY, UNABLE TO READ FROM VIDEO |
| 18.279 | 18.306 | CURB | RIGHT | N/A |
| 18.280 | 18.329 | PULLOUT | RIGHT | N/A |
| 18.305 | 18.305 | SIGN | RIGHT | GUIDE, UNABLE TO READ FROM VIDEO |
| 18.307 | 18.331 | CURB | RIGHT | N/A |
| 18.336 | 18.336 | SIGN | LEFT | REGULATORY, SPEED LIMIT 25 |
| 18.366 | 18.366 | SIGN | RIGHT | REGULATORY, NO PARKING THIS SIDE OF STREET |
| 18.454 | 18.454 | SIGN | RIGHT | REGULATORY, NO PARKING THIS SIDE OF STREET |
| 18.513 | 18.513 | SIGN | RIGHT | REGULATORY, NO PARKING THIS SIDE OF STREET |
| 18.562 | 18.562 | INTERSECTION | N/A | ROUTE 0927 (ERUPTION SITE TURN-AROUND PARKING) |
| 18.562 | 18.562 | ROUTE END | N/A | TO ROUTE 0927 (ERUPTION SITE TURN-AROUND PARKING) |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0013: OFFICE AREA STREET

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|--------------------------|------------------------|----------------|-------------|--|
| 0.000 | 0.000 | ROUTE BEGIN | N/A | FROM ROUTE 0010 (CRATER RIM DRIVE) AT MP 0.26 ON RIGHT |
| 0.000 | 0.000 | INTERSECTION | RIGHT | ROUTE 0010 (CRATER RIM DRIVE) |
| 0.000 | 0.000 | INTERSECTION | N/A | ROUTE 0401 (NORTH RESIDENCE ROAD) |
| 0.000 | 0.000 | INTERSECTION | LEFT | ROUTE 0010 (CRATER RIM DRIVE) |
| 0.005 | 0.005 | SIGN | RIGHT | GUIDE, JAGGAR MUSEUM LAVA TUBE HIGHWAY 11 |
| 0.007 | 0.007 | SIGN | LEFT | REGULATORY, STOP |
| 0.007 | 0.009 | CURB | RIGHT | N/A |
| 0.011 | 0.011 | INTERSECTION | LEFT | ROUTE 0900AZ (KILAUEA VISITORS CENTER PARKING AREA A) |
| 0.011 | 0.011 | INTERSECTION | RIGHT | ROUTE 0900BZ (KILAUEA VISITORS CENTER PARKING AREA B) |
| 0.014 | 0.016 | CURB | LEFT | N/A |
| 0.014 | 0.016 | CURB | RIGHT | N/A |
| 0.022 | 0.022 | SIGN | LEFT | REGULATORY, STOP |
| 0.023 | 0.023 | SIGN | RIGHT | GUIDE, SERVICE ROAD EMPLOYEES ONLY |
| 0.049 | 0.049 | INTERSECTION | N/A | ROUTE 0901 (KILAUEA VISITORS CENTER ADMINISTRATIVE PARKING) |
| 0.049 | 0.049 | ROUTE END | N/A | TO ROUTE 0901 (KILAUEA VISITORS CENTER ADMINISTRATIVE PARKING) |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0100A: MAUNA LOA ROAD

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|---------------|-------------|--------------|-------|--|
| 0.000 | 0.000 | ROUTE BEGIN | N/A | FROM ROUTE 5011 (HAWAII STATE ROUTE 11 (HAWAII BELT ROAD / MAMALAHOA HIGHWAY)) |
| 0.000 | 0.000 | SIGN | LEFT | REGULATORY, DO NOT ENTER |
| 0.000 | 0.000 | INTERSECTION | LEFT | ROUTE 5011 (HAWAII STATE ROUTE 11 (HAWAII BELT ROAD / MAMALAHOA HIGHWAY)) |
| 0.000 | 0.000 | INTERSECTION | RIGHT | ROUTE 5011 (HAWAII STATE ROUTE 11 (HAWAII BELT ROAD / MAMALAHOA HIGHWAY)) |
| 0.000 | 0.000 | INTERSECTION | N/A | ROUTE 0417 (MAUNA LOA EMERGENCY ACCESS ROAD) |
| 0.006 | 0.006 | SIGN | LEFT | REGULATORY, STOP |
| 0.016 | 0.016 | SIGN | RIGHT | GUIDE, MAUNA LOA ROAD TREE MOLDS .6 BIRD PARK 1.5 END OF ROAD |
| 0.029 | 0.029 | SIGN | LEFT | GUIDE, PARK ENTRANCE HILO KAILUA |
| 0.030 | 0.030 | SIGN | RIGHT | REGULATORY, SPEED LIMIT 35 |
| 0.049 | 0.049 | SIGN | RIGHT | GUIDE, TREE MOLDS |
| 0.049 | 0.049 | SIGN | RIGHT | GUIDE, U.S. FEE AREA |
| 0.059 | 0.059 | SIGN | LEFT | WARNING, GRAPHIC SIGN NO TEXT |
| 0.066 | 0.066 | INTERSECTION | RIGHT | ROUTE 0205 (TREE MOLDS ROAD) |
| 0.102 | 0.102 | SIGN | LEFT | GUIDE, TREE MOLDS |
| 0.149 | 0.149 | SIGN | LEFT | WARNING, GRAPHIC SIGN NO TEXT |
| 1.362 | 1.362 | SIGN | LEFT | REGULATORY, SPEED LIMIT 35 |
| 1.388 | 1.388 | SIGN | LEFT | GUIDE, DAY USE AREA |
| 1.391 | 1.391 | INTERSECTION | RIGHT | ROUTE 0925 (KIPUKA PUAULU DAY USE AREA PARKING) |
| 1.469 | 1.469 | INTERSECTION | LEFT | ROUTE 0923 (KIPUKA PUAULU TRAILHEAD PARKING) |
| 1.476 | 1.476 | SIGN | LEFT | REGULATORY, GRAPHIC SIGN NO TEXT |
| 1.476 | 1.476 | SIGN | LEFT | REGULATORY, KEEP RIGHT |
| 1.489 | 1.489 | SIGN | RIGHT | GUIDE, KIPUKA PUAULU |
| 1.490 | 1.490 | INTERSECTION | N/A | ROUTE 0923 (KIPUKA PUAULU TRAILHEAD PARKING) |
| 1.490 | 1.490 | ROUTE END | N/A | TO ROUTE 0923 (KIPUKA PUAULU TRAILHEAD PARKING) |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0100B: MAUNA LOA LOOKOUT ROAD

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|---------------|-------------|--------------|-------|--|
| 0.000 | 0.000 | ROUTE BEGIN | N/A | FROM ROUTE 0923 (KIPUKA PUAULU TRAILHEAD PARKING) |
| 0.000 | 0.000 | INTERSECTION | RIGHT | ROUTE 0923 (KIPUKA PUAULU TRAILHEAD PARKING) |
| 0.000 | 0.000 | INTERSECTION | LEFT | ROUTE 0923 (KIPUKA PUAULU TRAILHEAD PARKING) |
| 0.006 | 0.006 | SIGN | LEFT | REGULATORY, GRAPHIC SIGN NO TEXT |
| 0.006 | 0.006 | SIGN | N/A | REGULATORY, ROAD CLOSED EXTREME FIRE DANGER |
| 0.006 | 0.006 | GATE | N/A | N/A |
| 0.010 | 0.010 | SIGN | LEFT | GUIDE, KIPUKA PUAULU |
| 0.010 | 0.010 | SIGN | RIGHT | GUIDE, KIPUKA KI 1 LOOKOUT 10 |
| 0.010 | 0.010 | SIGN | RIGHT | REGULATORY, THE SILVERSWORD EXCLOSURE IS TEMPORARILY CLOSED. THE MAUNA LOA TRAIL REMAINS OPEN. |
| 0.035 | 0.035 | SIGN | RIGHT | REGULATORY, SPEED LIMIT 25 |
| 0.076 | 0.076 | SIGN | LEFT | GUIDE, SERVICE ROAD EMPLOYEES ONLY |
| 0.078 | 0.078 | INTERSECTION | LEFT | ROUTE 0415 (MAUNA LOA QUARRY ROAD) |
| 0.086 | 0.086 | SIGN | RIGHT | WARNING, DRY AREA PREVENT FIRES |
| 0.096 | 0.096 | GATE | N/A | N/A |
| 0.096 | 0.096 | SIGN | LEFT | REGULATORY, GRAPHIC SIGN NO TEXT |
| 0.097 | 0.097 | SIGN | RIGHT | REGULATORY, UNABLE TO READ FROM VIDEO |
| 1.442 | 1.442 | SIGN | RIGHT | GUIDE, KIPUKA KI |
| 1.462 | 1.462 | SIGN | RIGHT | GUIDE, KIPUKA KI SPECIAL ECOLOGICAL |
| 1.914 | 1.914 | SIGN | LEFT | GUIDE, KIPUKA KI |
| 2.056 | 2.056 | SIGN | RIGHT | WARNING, CATTLE GUARD |
| 2.056 | 2.056 | SIGN | RIGHT | WARNING, 15 MPH |
| 2.086 | 2.086 | SIGN | RIGHT | WARNING, ONE LANE ROAD NEXT 8 MILES |
| 2.127 | 2.127 | SIGN | RIGHT | WARNING, GRAPHIC SIGN NO TEXT |
| 2.137 | 2.137 | SIGN | LEFT | REGULATORY, SPEED LIMIT 25 |
| 2.150 | 2.150 | INTERSECTION | LEFT | UNPAVED PARKING |
| 2.155 | 2.155 | GATE | N/A | N/A |
| 2.156 | 2.156 | SIGN | RIGHT | REGULATORY, GRAPHIC SIGN NO TEXT |
| 2.158 | 2.158 | CATTLE GUARD | N/A | N/A |
| 2.200 | 2.200 | SIGN | RIGHT | REGULATORY, SPEED LIMIT 15 |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0100B: MAUNA LOA LOOKOUT ROAD

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|---------------|-------------|--------------|-------|--|
| 2.248 | 2.248 | SIGN | LEFT | WARNING, CATTLE GUARD |
| 2.546 | 2.546 | SIGN | LEFT | REGULATORY, NO PARKING ANY TIME |
| 2.972 | 2.972 | SIGN | RIGHT | GUIDE, GRAPHIC SIGN NO TEXT |
| 2.972 | 2.972 | SIGN | RIGHT | GUIDE, GRAPHIC SIGN NO TEXT |
| 2.976 | 2.976 | SIGN | RIGHT | GUIDE, GRAPHIC SIGN NO TEXT |
| 2.976 | 2.976 | SIGN | RIGHT | GUIDE, GRAPHIC SIGN NO TEXT |
| 2.976 | 2.976 | SIGN | RIGHT | REGULATORY, NO PARKING |
| 3.137 | 3.137 | SIGN | RIGHT | REGULATORY, SPEED LIMIT 15 |
| 3.138 | 3.138 | SIGN | LEFT | REGULATORY, SPEED LIMIT 15 |
| 4.246 | 4.246 | SIGN | RIGHT | WARNING, CATTLE GUARD |
| 4.336 | 4.336 | INTERSECTION | RIGHT | UNPAVED PARKING |
| 4.343 | 4.343 | INTERSECTION | LEFT | UNPAVED ROUTE |
| 4.344 | 4.344 | SIGN | RIGHT | WARNING, GRAPHIC SIGN NO TEXT |
| 4.345 | 4.345 | SIGN | LEFT | WARNING, GRAPHIC SIGN NO TEXT |
| 4.345 | 4.345 | CATTLE GUARD | N/A | N/A |
| 4.347 | 4.347 | SIGN | LEFT | WARNING, GRAPHIC SIGN NO TEXT |
| 4.347 | 4.347 | SIGN | RIGHT | WARNING, GRAPHIC SIGN NO TEXT |
| 4.442 | 4.442 | SIGN | LEFT | WARNING, CATTLE GUARD |
| 4.586 | 4.586 | CULVERT | N/A | N/A |
| 4.632 | 4.632 | SIGN | RIGHT | REGULATORY, SPEED LIMIT 15 |
| 4.632 | 4.632 | SIGN | LEFT | REGULATORY, SPEED LIMIT 15 |
| 5.064 | 5.064 | CULVERT | N/A | N/A |
| 5.466 | 5.466 | CULVERT | N/A | N/A |
| 6.623 | 6.623 | SIGN | LEFT | REGULATORY, SPEED LIMIT 15 |
| 6.652 | 6.652 | SIGN | RIGHT | REGULATORY, SPEED LIMIT 15 |
| 6.676 | 6.676 | SIGN | RIGHT | GUIDE, KE AMOKU FLOW ELEVATION 5639 |
| 6.749 | 6.749 | SIGN | LEFT | GUIDE, KE AMOKU FLOW ELEVATION 5639 |
| 9.768 | 9.768 | SIGN | LEFT | REGULATORY, SPEED LIMIT 15 |
| 9.794 | 9.794 | SIGN | RIGHT | GUIDE, UNABLE TO READ FROM VIDEO |
| 9.810 | 9.810 | INTERSECTION | N/A | ROUTE 0944 (MAUNA LOA LOOKOUT PARKING) |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0100B: MAUNA LOA LOOKOUT ROAD

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|--------------------------|------------------------|----------------|-------------|---|
| 9.810 | 9.810 | ROUTE END | N/A | TO ROUTE 0944 (MAUNA LOA LOOKOUT UNPAVED PARKING) |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0101: HILINA PALI ROAD

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|---------------|-------------|--------------|-------|---|
| 0.000 | 0.000 | ROUTE BEGIN | N/A | FROM ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 2.21 ON RIGHT |
| 0.000 | 0.000 | INTERSECTION | LEFT | ROUTE 0012 (CHAIN OF CRATERS ROAD) |
| 0.000 | 0.000 | INTERSECTION | RIGHT | ROUTE 0012 (CHAIN OF CRATERS ROAD) |
| 0.008 | 0.008 | GATE | N/A | N/A |
| 0.008 | 0.008 | SIGN | LEFT | REGULATORY, STOP |
| 0.011 | 0.011 | SIGN | N/A | GUIDE, CHAIN OF CRATERS RD CRATER RIM DRIVE MAUNA ULU |
| 0.011 | 0.011 | SIGN | RIGHT | REGULATORY, GRAPHIC SIGN NO TEXT |
| 0.012 | 0.012 | SIGN | RIGHT | REGULATORY, UNABLE TO READ FROM VIDEO |
| 0.034 | 0.034 | SIGN | RIGHT | GUIDE, CAMPGROUND 4.0 MI MAUNA IKI TRAILHEAD 4.5 MI OVERLOOK 9.0 MI ROAD ENDS AT OVERLOOK |
| 0.034 | 0.034 | SIGN | RIGHT | GUIDE, NENE TERRITORY |
| 0.080 | 0.080 | SIGN | RIGHT | REGULATORY, SPEED LIMIT 25 |
| 0.140 | 0.140 | SIGN | RIGHT | WARNING, ONE LANE ROAD |
| 0.140 | 0.140 | SIGN | RIGHT | WARNING, UNEVEN SHOULDER |
| 1.637 | 1.637 | INTERSECTION | RIGHT | ROUTE 0414 (HILINA PALI FUEL BREAK ROAD) |
| 3.544 | 3.544 | SIGN | RIGHT | GUIDE, KULANAOKUAIKI CAMPGROUND |
| 3.544 | 3.544 | SIGN | RIGHT | GUIDE, EMERGENCY PHONE 911 ONLY |
| 3.591 | 3.591 | INTERSECTION | RIGHT | ROUTE 0933 (KULANAOKUAIKI CAMPGROUND PARKING) |
| 3.631 | 3.631 | SIGN | LEFT | GUIDE, EMERGENCY PHONE 911 ONLY |
| 3.631 | 3.631 | SIGN | LEFT | GUIDE, KULANAOKUAIKI CAMPGROUND |
| 3.765 | 3.765 | SIGN | RIGHT | GUIDE, MAUNA LOA |
| 3.787 | 3.787 | SIGN | RIGHT | GUIDE, UNABLE TO READ FROM VIDEO |
| 3.787 | 3.787 | SIGN | RIGHT | GUIDE, UNABLE TO READ FROM VIDEO |
| 3.804 | 3.804 | SIGN | LEFT | GUIDE, MAUNA IKI |
| 3.837 | 3.837 | INTERSECTION | RIGHT | ROUTE 0946 (MAUNA IKI UNPAVED TRAILHEAD PARKING) |
| 3.868 | 3.868 | SIGN | LEFT | REGULATORY, UNABLE TO READ FROM VIDEO |
| 3.869 | 3.869 | GATE | N/A | N/A |
| 4.582 | 4.582 | SIGN | RIGHT | WARNING, 15 MPH |
| 4.582 | 4.582 | SIGN | RIGHT | WARNING, GRAPHIC SIGN NO TEXT |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0101: HILINA PALI ROAD

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|------------------|----------------|--------------------|-------|---|
| 4.955 | 4.955 | SIGN | RIGHT | WARNING, BUMP |
| 4.959 | 4.959 | SIGN | LEFT | WARNING, BUMP |
| 5.060 | 5.060 | SIGN | RIGHT | WARNING, BUMP |
| 5.062 | 5.062 | SIGN | LEFT | WARNING, BUMP |
| 5.281 | 5.281 | SIGN | LEFT | WARNING, 15 MPH |
| 5.281 | 5.281 | SIGN | LEFT | WARNING, GRAPHIC SIGN NO TEXT |
| 5.530 | 5.548 | LOW WATER CROSSING | N/A | N/A |
| 6.564 | 6.576 | LOW WATER CROSSING | N/A | N/A |
| 7.399 | 7.418 | LOW WATER CROSSING | N/A | N/A |
| 8.412 | 8.412 | SIGN | LEFT | WARNING, DRY AREA PREVENT FIRES |
| 8.439 | 8.439 | SIGN | LEFT | WARNING, ONE LANE ROAD |
| 8.439 | 8.439 | SIGN | LEFT | WARNING, UNEVEN SHOULDER |
| 8.455 | 8.455 | SIGN | LEFT | GUIDE, MAUNA IKI TRAILHEAD 5.0 MI CAMPGROUND 5.5 MI CHAIN OF CRATERS RD 9.0 MI |
| 8.472 | 8.472 | SIGN | LEFT | REGULATORY, SPEED LIMIT 25 |
| 8.491 | 8.491 | INTERSECTION | RIGHT | ROUTE 0947 (HILINA PALI UNPAVED OVERLOOK PARKING) |
| 8.493 | 8.493 | INTERSECTION | RIGHT | ROUTE 0940 (HILINA PALI HANDICAP OVERLOOK PARKING) |
| 8.495 | 8.495 | INTERSECTION | N/A | DEAD END |
| 8.495 | 8.495 | ROUTE END | N/A | TO ROUTE 0940 (HILINA PALI HANDICAP OVERLOOK PARKING) |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0201: KILAUEA OVERLOOK ROAD

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|--------------------------|------------------------|----------------|-------------|--|
| 0.000 | 0.000 | ROUTE BEGIN | N/A | FROM ROUTE 0010 (CRATER RIM DRIVE) AT MP 2.38 ON LEFT |
| 0.000 | 0.000 | INTERSECTION | LEFT | ROUTE 0010 (CRATER RIM DRIVE) |
| 0.000 | 0.000 | INTERSECTION | RIGHT | ROUTE 0010 (CRATER RIM DRIVE) |
| 0.005 | 0.005 | SIGN | LEFT | REGULATORY, STOP |
| 0.018 | 0.018 | SIGN | RIGHT | GUIDE, UNABLE TO READ FROM VIDEO |
| 0.018 | 0.018 | SIGN | RIGHT | REGULATORY, SPEED LIMIT 15 |
| 0.106 | 0.106 | SIGN | RIGHT | WARNING, GRAPHIC SIGN NO TEXT |
| 0.156 | 0.156 | INTERSECTION | RIGHT | ROUTE 0910AZ (KILAUEA PICNIC AREA PARKING) |
| 0.156 | 0.156 | SIGN | RIGHT | GUIDE, GRAPHIC SIGN NO TEXT |
| 0.156 | 0.156 | SIGN | RIGHT | GUIDE, GRAPHIC SIGN NO TEXT |
| 0.198 | 0.198 | INTERSECTION | N/A | ROUTE 0910BZ (KILAUEA OVERLOOK PARKING) |
| 0.198 | 0.198 | ROUTE END | N/A | TO ROUTE 0910ZZ (KILAUEA OVERLOOK AND PICNIC AREA PARKING AREAS) |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0204A: NAMAKANI PAIO CAMPGROUND ROAD

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|---------------|-------------|--------------|-------|--|
| 0.000 | 0.000 | ROUTE BEGIN | N/A | FROM ROUTE 5011 (HAWAII STATE ROUTE 11 (HAWAII BELT ROAD / MAMALAHOA HIGHWAY)) AT MP 3.90 ON RIGHT |
| 0.000 | 0.000 | SIGN | N/A | GUIDE, GRAPHIC SIGN NO TEXT |
| 0.000 | 0.000 | SIGN | N/A | GUIDE, UNABLE TO READ FROM VIDEO |
| 0.000 | 0.000 | SIGN | N/A | GUIDE, GRAPHIC SIGN NO TEXT |
| 0.000 | 0.000 | SIGN | N/A | GUIDE, GRAPHIC SIGN NO TEXT |
| 0.000 | 0.000 | INTERSECTION | RIGHT | ROUTE 5011 (HAWAII STATE ROUTE 11 (HAWAII BELT ROAD / MAMALAHOA HIGHWAY)) |
| 0.000 | 0.000 | INTERSECTION | LEFT | ROUTE 5011 (HAWAII STATE ROUTE 11 (HAWAII BELT ROAD / MAMALAHOA HIGHWAY)) |
| 0.000 | 0.000 | SIGN | N/A | GUIDE, GRAPHIC SIGN NO TEXT |
| 0.006 | 0.006 | SIGN | LEFT | REGULATORY, STOP |
| 0.011 | 0.011 | GATE | N/A | N/A |
| 0.012 | 0.012 | SIGN | RIGHT | REGULATORY, GRAPHIC SIGN NO TEXT |
| 0.012 | 0.012 | SIGN | LEFT | REGULATORY, GRAPHIC SIGN NO TEXT |
| 0.013 | 0.013 | SIGN | LEFT | GUIDE, PARK ENTRANCE HILO KAILUA |
| 0.013 | 0.013 | SIGN | RIGHT | REGULATORY, ROAD CLOSED |
| 0.031 | 0.031 | SIGN | RIGHT | REGULATORY, SPEED LIMIT 15 |
| 0.054 | 0.054 | INTERSECTION | RIGHT | ROUTE 0204B (NAMAKANI PAIO RENTAL CABIN ACCESS ROAD) |
| 0.068 | 0.068 | SIGN | RIGHT | GUIDE, CAMPING LIMIT 7 DAYS |
| 0.068 | 0.068 | SIGN | RIGHT | GUIDE, U.S. FEE AREA |
| 0.069 | 0.069 | SIGN | LEFT | REGULATORY, GRAPHIC SIGN NO TEXT |
| 0.069 | 0.069 | GATE | N/A | N/A |
| 0.070 | 0.070 | SIGN | RIGHT | REGULATORY, GRAPHIC SIGN NO TEXT |
| 0.070 | 0.070 | SIGN | RIGHT | GUIDE, RENTAL CABINS REGISTRATION AT VOLCANO HOUSE |
| 0.126 | 0.126 | INTERSECTION | LEFT | ROUTE 0945AZ (NAMAKANI PAIO CAMPGROUND UNPAVED PARKING A) |
| 0.156 | 0.156 | INTERSECTION | RIGHT | ROUTE 0945BZ (NAMAKANI PAIO CAMPGROUND UNPAVED PARKING B) |
| 0.187 | 0.187 | INTERSECTION | LEFT | ROUTE 0204A (NAMAKANI PAIO CAMPGROUND ROAD) |
| 0.187 | 0.318 | ONE-WAY | N/A | N/A |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0204A: NAMAKANI PAIO CAMPGROUND ROAD

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|--------------------------|------------------------|----------------|-------------|---|
| 0.190 | 0.190 | SIGN | N/A | REGULATORY, GRAPHIC SIGN NO TEXT |
| 0.190 | 0.190 | SIGN | N/A | GUIDE, UNABLE TO READ FORM VIDEO |
| 0.318 | 0.318 | INTERSECTION | LEFT | ROUTE 0204A (NAMAKANI PAIO CAMPGROUND ROAD) |
| 0.318 | 0.318 | INTERSECTION | RIGHT | ROUTE 0204A (NAMAKANI PAIO CAMPGROUND ROAD) |
| 0.318 | 0.318 | ROUTE END | N/A | TO END OF LOOP |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0205: TREE MOLDS ROAD

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|------------------|----------------|------------------|-------|---|
| 0.000 | 0.000 | ROUTE BEGIN | N/A | FROM ROUTE 0100A (MAUNA LOA ROAD) AT MP 0.17 ON RIGHT |
| 0.000 | 0.000 | INTERSECTION | LEFT | ROUTE 0100A (MAUNA LOA ROAD) |
| 0.000 | 0.000 | INTERSECTION | RIGHT | ROUTE 0100A (MAUNA LOA ROAD) |
| 0.006 | 0.006 | SIGN | LEFT | REGULATORY, STOP |
| 0.008 | 0.008 | SIGN | RIGHT | REGULATORY, SPEED LIMIT 15 |
| 0.022 | 0.022 | SIGN | LEFT | GUIDE, HIGHWAY 11 KIPUKA PUAULU |
| 0.115 | 0.115 | INTERSECTION | LEFT | ROUTE 0404 (TREE MOLDS STABLE ROAD) |
| 0.128 | 0.128 | SIGN | LEFT | GUIDE, SERVICE ROAD EMPLOYEES ONLY |
| 0.128 | 0.128 | SIGN | LEFT | REGULATORY, NO PARKING ANY TIME |
| 0.224 | 0.224 | INTERSECTION | LEFT | ROUTE 0205 (TREE MOLDS ROAD) |
| 0.224 | 0.562 | ONE-WAY | N/A | N/A |
| 0.229 | 0.229 | SIGN | LEFT | REGULATORY, DO NOT ENTER |
| 0.230 | 0.230 | SIGN | LEFT | REGULATORY, ONE WAY |
| 0.432 | 0.432 | SIGN | LEFT | REGULATORY, DO NOT ENTER |
| 0.442 | 0.442 | INTERSECTION | RIGHT | ROUTE 0928 (TREE MOLDS PARKING) |
| 0.480 | 0.486 | GUARD/GUIDE RAIL | RIGHT | N/A |
| 0.556 | 0.556 | SIGN | RIGHT | REGULATORY, DO NOT ENTER |
| 0.562 | 0.562 | INTERSECTION | LEFT | ROUTE 0205 (TREE MOLDS ROAD) |
| 0.562 | 0.562 | INTERSECTION | N/A | ROUTE 0205 (TREE MOLDS ROAD) |
| 0.562 | 0.562 | ROUTE END | N/A | TO END OF LOOP |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0208: MAUNA ULU ACCESS ROAD

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|---------------|-------------|--------------|-------|--|
| 0.000 | 0.000 | ROUTE BEGIN | N/A | FROM ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 3.66 ON LEFT |
| 0.000 | 0.000 | INTERSECTION | RIGHT | ROUTE 0012 (CHAIN OF CRATERS ROAD) |
| 0.000 | 0.000 | INTERSECTION | LEFT | ROUTE 0012 (CHAIN OF CRATERS ROAD) |
| 0.007 | 0.007 | SIGN | LEFT | REGULATORY, STOP |
| 0.011 | 0.011 | SIGN | N/A | GUIDE, CRATER RIM DR. VIEW POINTS |
| 0.015 | 0.015 | GATE | N/A | N/A |
| 0.019 | 0.019 | SIGN | RIGHT | REGULATORY, ROAD CLOSED |
| 0.044 | 0.044 | SIGN | RIGHT | WARNING, DEAD END |
| 0.137 | 0.137 | INTERSECTION | LEFT | ROUTE 0408 (EMERGENCY ESCAPE ROAD) |
| 0.308 | 0.308 | SIGN | RIGHT | REGULATORY, SPEED LIMIT 15 |
| 0.344 | 0.344 | INTERSECTION | LEFT | ROUTE 0208 (MAUNA ULU ACCESS ROAD) |
| 0.344 | 0.536 | ONE-WAY | N/A | N/A |
| 0.359 | 0.359 | SIGN | N/A | REGULATORY, GRAPHIC SIGN NO TEXT |
| 0.363 | 0.363 | SIGN | N/A | REGULATORY, DO NOT ENTER |
| 0.453 | 0.453 | INTERSECTION | RIGHT | PAVED TRAIL |
| 0.454 | 0.479 | CURB | RIGHT | N/A |
| 0.458 | 0.458 | SIGN | RIGHT | REGULATORY, NO PARKING BETWEEN SIGNS |
| 0.495 | 0.495 | INTERSECTION | RIGHT | ROUTE 0920 (MAUNA ULU LAVA SHIELD PARKING) |
| 0.513 | 0.536 | CURB | RIGHT | N/A |
| 0.536 | 0.536 | INTERSECTION | N/A | ROUTE 0208 (MAUNA ULU ACCESS ROAD) |
| 0.536 | 0.536 | INTERSECTION | LEFT | ROUTE 0208 (MAUNA ULU ACCESS ROAD) |
| 0.536 | 0.536 | ROUTE END | N/A | TO END OF LOOP |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0209: PUU PUI OVERLOOK ROAD

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|--------------------------|------------------------|----------------|-------------|---|
| 0.000 | 0.000 | ROUTE BEGIN | N/A | FROM ROUTE 0010 (CRATER RIM DRIVE) AT MP 7.86 ON LEFT |
| 0.000 | 0.000 | INTERSECTION | LEFT | ROUTE 0010 (CRATER RIM DRIVE) |
| 0.000 | 0.000 | INTERSECTION | RIGHT | ROUTE 0010 (CRATER RIM DRIVE) |
| 0.006 | 0.006 | SIGN | LEFT | REGULATORY, STOP |
| 0.009 | 0.009 | SIGN | N/A | GUIDE, HIGHWAY 21 |
| 0.015 | 0.015 | GATE | N/A | N/A |
| 0.017 | 0.017 | SIGN | RIGHT | REGULATORY, ROAD CLOSED |
| 0.018 | 0.018 | SIGN | RIGHT | REGULATORY, GRAPHIC SIGN NO TEXT |
| 0.019 | 0.019 | SIGN | RIGHT | REGULATORY, SPEED LIMIT 25 |
| 0.199 | 0.199 | INTERSECTION | N/A | ROUTE 0914 (PUU PUI PARKING) |
| 0.199 | 0.199 | ROUTE END | N/A | TO ROUTE 0914 (PUU PUI PARKING) |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0211: STEAM VENTS ROAD

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|--------------------------|------------------------|----------------|-------------|---|
| 0.000 | 0.000 | ROUTE BEGIN | N/A | FROM ROUTE 0010 (CRATER RIM DRIVE) AT MP 1.06 ON LEFT |
| 0.000 | 0.000 | INTERSECTION | RIGHT | ROUTE 0010 (CRATER RIM DRIVE) |
| 0.000 | 0.000 | INTERSECTION | LEFT | ROUTE 0010 (CRATER RIM DRIVE) |
| 0.000 | 0.122 | ONE-WAY | N/A | N/A |
| 0.012 | 0.060 | CURB | RIGHT | N/A |
| 0.016 | 0.016 | SIGN | RIGHT | REGULATORY, NO PARKING ANY TIME |
| 0.016 | 0.016 | SIGN | RIGHT | REGULATORY, UNABLE TO READ FROM VIDEO |
| 0.043 | 0.043 | INTERSECTION | LEFT | ROUTE 0909CZ (STEAM VENTS PARKING C) |
| 0.044 | 0.044 | SIGN | RIGHT | REGULATORY, UNABLE TO READ FROM VIDEO |
| 0.044 | 0.044 | SIGN | RIGHT | REGULATORY, NO PARKING ANY TIME |
| 0.072 | 0.072 | INTERSECTION | LEFT | ROUTE 0909AZ (STEAM VENTS PARKING A) |
| 0.080 | 0.080 | INTERSECTION | RIGHT | ROUTE 0909BZ (STEAM VENTS PARKING B) |
| 0.097 | 0.097 | SIGN | RIGHT | GUIDE, UNABLE TO READ FROM VIDEO |
| 0.122 | 0.122 | INTERSECTION | LEFT | ROUTE 0010 (CRATER RIM DRIVE) |
| 0.122 | 0.122 | INTERSECTION | RIGHT | ROUTE 0010 (CRATER RIM DRIVE) |
| 0.122 | 0.122 | SIGN | RIGHT | REGULATORY, STOP |
| 0.122 | 0.122 | ROUTE END | N/A | TO ROUTE 0010 (CRATER RIM DRIVE) AT MP 0.95 ON LEFT |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0214: KILAUEA MILITARY CAMP ROAD

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|---------------|-------------|--------------|-------|---|
| 0.000 | 0.000 | ROUTE BEGIN | N/A | FROM ROUTE 0010 (CRATER RIM DRIVE) AT MP 1.49 ON RIGHT |
| 0.000 | 0.000 | INTERSECTION | RIGHT | ROUTE 0010 (CRATER RIM DRIVE) |
| 0.000 | 0.000 | INTERSECTION | LEFT | ROUTE 0010 (CRATER RIM DRIVE) |
| 0.007 | 0.007 | SIGN | LEFT | REGULATORY, STOP |
| 0.008 | 0.008 | GATE | N/A | N/A |
| 0.030 | 0.030 | SIGN | RIGHT | REGULATORY, SPEED LIMIT 15 |
| 0.043 | 0.043 | INTERSECTION | RIGHT | ROUTE 0215CZ (KILAUEA MILITARY CAMP ROAD C) |
| 0.048 | 0.048 | INTERSECTION | LEFT | ROUTE 0938AZ (KILAUEA MILITARY CAMP UNPAVED PARKING A) |
| 0.052 | 0.062 | CURB | RIGHT | N/A |
| 0.057 | 0.057 | SIGN | RIGHT | GUIDE, FIRE DEPT. CAFETERIA |
| 0.069 | 0.069 | INTERSECTION | RIGHT | ROUTE 0215EZ (KILAUEA MILITARY CAMP ROAD E) |
| 0.070 | 0.088 | CURB | RIGHT | N/A |
| 0.093 | 0.097 | CURB | RIGHT | N/A |
| 0.097 | 0.097 | INTERSECTION | LEFT | ROUTE 0937AZ (KILAUEA MILITARY CAMP PARKING A) |
| 0.119 | 0.119 | INTERSECTION | RIGHT | ROUTE 0937BZ (KILAUEA MILITARY CAMP PARKING B) |
| 0.134 | 0.134 | INTERSECTION | LEFT | ROUTE 0937AZ (KILAUEA MILITARY CAMP PARKING A) |
| 0.139 | 0.139 | SIGN | LEFT | GUIDE, UNABLE TO READ FROM VIDEO |
| 0.139 | 0.139 | INTERSECTION | RIGHT | ROUTE 0215JZ (KILAUEA MILITARY CAMP ROAD J) |
| 0.140 | 0.140 | DROP INLET | N/A | N/A |
| 0.147 | 0.147 | SIGN | LEFT | REGULATORY, STOP |
| 0.151 | 0.151 | INTERSECTION | LEFT | UNPAVED ROUTE |
| 0.153 | 0.153 | INTERSECTION | RIGHT | ROUTE 0937GZ (KILAUEA MILITARY CAMP PARKING G) |
| 0.169 | 0.169 | INTERSECTION | LEFT | ROUTE 0419BZ (KILAUEA MILITARY CAMP BONEYARD ROAD) |
| 0.179 | 0.179 | SIGN | LEFT | REGULATORY, SPEED LIMIT 15 M.P.H. |
| 0.195 | 0.195 | INTERSECTION | LEFT | ROUTE 5011 (HAWAII STATE ROUTE 11 (HAWAII BELT ROAD / MAMALAHOA HIGHWAY)) |
| 0.195 | 0.195 | SIGN | N/A | REGULATORY, NO PARKING FIRE LANE |
| 0.195 | 0.195 | SIGN | N/A | REGULATORY, GRAPHIC SIGN NO TEXT |
| 0.195 | 0.195 | SIGN | N/A | REGULATORY, GRAPHIC SIGN NO TEXT |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0214: KILAUEA MILITARY CAMP ROAD

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|--------------------------|------------------------|----------------|-------------|---|
| 0.195 | 0.195 | INTERSECTION | RIGHT | ROUTE 5011 (HAWAII STATE ROUTE 11 (HAWAII BELT ROAD / MAMALAHOA HIGHWAY)) |
| 0.195 | 0.195 | GATE | N/A | N/A |
| 0.195 | 0.195 | ROUTE END | N/A | TO ROUTE 5011 (HAWAII STATE ROUTE 11 (HAWAII BELT ROAD / MAMALAHOA HIGHWAY)) AT MP 2.59 ON LEFT |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0215AZ: KILAUEA MILITARY CAMP ROAD A

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|--------------------------|------------------------|----------------|-------------|--|
| 0.000 | 0.000 | ROUTE BEGIN | N/A | FROM ROUTE 0215BZ (KILAUEA MILITARY CAMP ROAD B) |
| 0.000 | 0.000 | INTERSECTION | LEFT | ROUTE 0215BZ (KILAUEA MILITARY CAMP ROAD B) |
| 0.000 | 0.000 | INTERSECTION | RIGHT | ROUTE 0215BZ (KILAUEA MILITARY CAMP ROAD B) |
| 0.004 | 0.036 | CURB | LEFT | N/A |
| 0.004 | 0.030 | CURB | RIGHT | N/A |
| 0.005 | 0.005 | SIGN | RIGHT | GUIDE, GRAPHIC SIGN NO TEXT |
| 0.005 | 0.005 | SIGN | RIGHT | GUIDE, HEADQUARTERS FRONT DESK LOBBY KOA ROOM FIRE DEPARTMENT |
| 0.038 | 0.038 | INTERSECTION | LEFT | ROUTE 0215CZ (KILAUEA MILITARY CAMP ROAD C) |
| 0.038 | 0.038 | INTERSECTION | RIGHT | ROUTE 0215CZ (KILAUEA MILITARY CAMP ROAD C) |
| 0.038 | 0.038 | ROUTE END | N/A | TO ROUTE 0215CZ (KILAUEA MILITARY CAMP ROAD C) |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0215BZ: KILAUEA MILITARY CAMP ROAD B

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|--------------------------|------------------------|----------------|-------------|---|
| 0.000 | 0.000 | ROUTE BEGIN | N/A | FROM ROUTE 0010 (CRATER RIM DRIVE) |
| 0.000 | 0.000 | INTERSECTION | LEFT | ROUTE 0010 (CRATER RIM DRIVE) |
| 0.000 | 0.000 | INTERSECTION | RIGHT | ROUTE 0010 (CRATER RIM DRIVE) |
| 0.003 | 0.006 | CURB | LEFT | N/A |
| 0.004 | 0.004 | GATE | N/A | N/A |
| 0.004 | 0.059 | CURB | RIGHT | N/A |
| 0.010 | 0.010 | INTERSECTION | LEFT | ROUTE 0215AZ (KILAUEA MILITARY CAMP ROAD A) |
| 0.010 | 0.039 | CURB | LEFT | N/A |
| 0.060 | 0.120 | CURB | RIGHT | N/A |
| 0.061 | 0.061 | INTERSECTION | LEFT | ROUTE 0215CZ (KILAUEA MILITARY CAMP ROAD C) |
| 0.065 | 0.065 | DROP INLET | RIGHT | N/A |
| 0.081 | 0.120 | CURB | LEFT | N/A |
| 0.118 | 0.118 | GATE | N/A | N/A |
| 0.119 | 0.119 | SIGN | RIGHT | REGULATORY, STOP |
| 0.121 | 0.121 | INTERSECTION | LEFT | ROUTE 0010 (CRATER RIM DRIVE) |
| 0.121 | 0.121 | INTERSECTION | RIGHT | ROUTE 0010 (CRATER RIM DRIVE) |
| 0.121 | 0.121 | ROUTE END | N/A | TO ROUTE 0010 (CRATER RIM DRIVE) |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0215CZ: KILAUEA MILITARY CAMP ROAD C

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|---------------|-------------|--------------|-------|---|
| 0.000 | 0.000 | ROUTE BEGIN | N/A | FROM ROUTE 0215DZ (KILAUEA MILITARY CAMP ROAD D) |
| 0.000 | 0.000 | INTERSECTION | LEFT | ROUTE 0215DZ (KILAUEA MILITARY CAMP ROAD D) |
| 0.000 | 0.000 | INTERSECTION | RIGHT | ROUTE 0215DZ (KILAUEA MILITARY CAMP ROAD D) |
| 0.008 | 0.008 | SIGN | LEFT | REGULATORY, STOP |
| 0.011 | 0.011 | SIGN | RIGHT | REGULATORY, SPEED LIMIT 15 |
| 0.024 | 0.050 | CURB | RIGHT | N/A |
| 0.051 | 0.061 | CURB | RIGHT | N/A |
| 0.067 | 0.067 | INTERSECTION | RIGHT | ROUTE 0215FZ (KILAUEA MILITARY CAMP ROAD F) |
| 0.069 | 0.069 | SIGN | LEFT | GUIDE, HEADQUARTERS REGISTRATION POST OFFICE CAFETERIA GENERAL STORE |
| 0.069 | 0.069 | SIGN | LEFT | GUIDE, CAFETERIA GENERAL STORE POST OFFICE |
| 0.071 | 0.103 | CURB | LEFT | N/A |
| 0.072 | 0.114 | CURB | RIGHT | N/A |
| 0.115 | 0.135 | CURB | RIGHT | N/A |
| 0.125 | 0.125 | INTERSECTION | LEFT | ROUTE 0215BZ (KILAUEA MILITARY CAMP ROAD B) |
| 0.134 | 0.134 | DROP INLET | RIGHT | N/A |
| 0.136 | 0.139 | CURB | RIGHT | N/A |
| 0.141 | 0.147 | CURB | RIGHT | N/A |
| 0.146 | 0.185 | CURB | LEFT | N/A |
| 0.148 | 0.152 | CURB | RIGHT | N/A |
| 0.153 | 0.201 | CURB | RIGHT | N/A |
| 0.199 | 0.199 | INTERSECTION | LEFT | ROUTE 0215AZ (KILAUEA MILITARY CAMP ROAD A) |
| 0.202 | 0.202 | SIGN | RIGHT | REGULATORY, STOP |
| 0.202 | 0.202 | INTERSECTION | LEFT | ROUTE 0214 (KILAUEA MILITARY CAMP ROAD) |
| 0.202 | 0.202 | INTERSECTION | RIGHT | ROUTE 0214 (KILAUEA MILITARY CAMP ROAD) |
| 0.202 | 0.202 | ROUTE END | N/A | TO ROUTE 0214 (KILAUEA MILITARY CAMP ROAD) |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0215DZ: KILAUEA MILITARY CAMP ROAD D

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|---------------|-------------|--------------|-------|---|
| 0.000 | 0.000 | ROUTE BEGIN | N/A | FROM ROUTE 0010 (CRATER RIM DRIVE) |
| 0.000 | 0.000 | INTERSECTION | LEFT | ROUTE 0010 (CRATER RIM DRIVE) |
| 0.000 | 0.000 | INTERSECTION | RIGHT | ROUTE 0010 (CRATER RIM DRIVE) |
| 0.007 | 0.007 | SIGN | LEFT | REGULATORY, STOP |
| 0.008 | 0.008 | GATE | N/A | N/A |
| 0.019 | 0.019 | SIGN | RIGHT | REGULATORY, SPEED LIMIT 15 |
| 0.042 | 0.042 | SIGN | RIGHT | GUIDE, HEADQUARTERS FRONT DESK POST OFFICE CAFETERIA GENERAL STORE THEATRE LEHUA ROOM |
| 0.043 | 0.043 | INTERSECTION | LEFT | ROUTE 0215CZ (KILAUEA MILITARY CAMP ROAD C) |
| 0.061 | 0.061 | INTERSECTION | LEFT | ROUTE 0937MZ (KILAUEA MILITARY CAMP PARKING M) |
| 0.135 | 0.135 | SIGN | RIGHT | GUIDE, EISENHOWER HOUSE GENERAL STORE BOWLING LANES |
| 0.146 | 0.146 | INTERSECTION | LEFT | ROUTE 0215JZ (KILAUEA MILITARY CAMP ROAD J) |
| 0.188 | 0.188 | INTERSECTION | LEFT | ROUTE 0215HZ (KILAUEA MILITARY CAMP ROAD H) |
| 0.213 | 0.213 | INTERSECTION | LEFT | ROUTE 0937KZ (KILAUEA MILITARY CAMP PARKING K) |
| 0.256 | 0.256 | INTERSECTION | LEFT | ROUTE 0938BZ (KILAUEA MILITARY CAMP UNPAVED PARKING B) |
| 0.265 | 0.265 | INTERSECTION | RIGHT | ROUTE 0419AZ (KILAUEA MILITARY CAMP POWERLINE ACCESS ROAD) |
| 0.274 | 0.274 | INTERSECTION | RIGHT | ROUTE 0937LZ (KILAUEA MILITARY CAMP PARKING L) |
| 0.278 | 0.278 | SIGN | RIGHT | REGULATORY, NO THRU TRAFFIC |
| 0.278 | 0.278 | SIGN | RIGHT | REGULATORY, STOP |
| 0.309 | 0.309 | INTERSECTION | LEFT | ROUTE 0215LZ (KILAUEA MILITARY CAMP ROAD L) |
| 0.329 | 0.329 | INTERSECTION | LEFT | ROUTE 0215KZ (KILAUEA MILITARY CAMP ROAD K) |
| 0.329 | 0.329 | INTERSECTION | RIGHT | ROUTE 0215KZ (KILAUEA MILITARY CAMP ROAD K) |
| 0.329 | 0.329 | ROUTE END | N/A | TO ROUTE 0215KZ (KILAUEA MILITARY CAMP ROAD K) |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0215EZ: KILAUEA MILITARY CAMP ROAD E

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|--------------------------|------------------------|----------------|-------------|--|
| 0.000 | 0.000 | ROUTE BEGIN | N/A | FROM ROUTE 0214 (KILAUEA MILITARY CAMP ROAD) |
| 0.000 | 0.000 | INTERSECTION | RIGHT | ROUTE 0214 (KILAUEA MILITARY CAMP ROAD) |
| 0.000 | 0.000 | INTERSECTION | LEFT | ROUTE 0214 (KILAUEA MILITARY CAMP ROAD) |
| 0.003 | 0.071 | CURB | RIGHT | N/A |
| 0.003 | 0.022 | CURB | LEFT | N/A |
| 0.004 | 0.004 | SIGN | LEFT | REGULATORY, STOP |
| 0.026 | 0.053 | CURB | LEFT | N/A |
| 0.054 | 0.058 | CURB | LEFT | N/A |
| 0.061 | 0.061 | INTERSECTION | LEFT | ROUTE 0215GZ (KILAUEA MILITARY CAMP ROAD G) |
| 0.075 | 0.083 | CURB | RIGHT | N/A |
| 0.076 | 0.082 | CURB | LEFT | N/A |
| 0.083 | 0.083 | INTERSECTION | LEFT | ROUTE 0937CZ (KILAUEA MILITARY CAMP PARKING C) |
| 0.089 | 0.089 | INTERSECTION | RIGHT | ROUTE 0937DZ (KILAUEA MILITARY CAMP PARKING D) |
| 0.093 | 0.098 | CURB | RIGHT | N/A |
| 0.099 | 0.116 | CURB | RIGHT | N/A |
| 0.104 | 0.117 | CURB | LEFT | N/A |
| 0.117 | 0.117 | INTERSECTION | N/A | ROUTE 0215FZ (KILAUEA MILITARY CAMP ROAD F) |
| 0.117 | 0.117 | ROUTE END | N/A | TO ROUTE 0215FZ (KILAUEA MILITARY CAMP ROAD F) |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0215GZ: KILAUEA MILITARY CAMP ROAD G

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|--------------------------|------------------------|----------------|-------------|--|
| 0.000 | 0.000 | ROUTE BEGIN | N/A | FROM ROUTE 0215JZ (KILAUEA MILITARY CAMP ROAD J) |
| 0.000 | 0.056 | ONE-WAY | N/A | N/A |
| 0.000 | 0.000 | INTERSECTION | LEFT | ROUTE 0215JZ (KILAUEA MILITARY CAMP ROAD J) |
| 0.000 | 0.000 | INTERSECTION | RIGHT | ROUTE 0215JZ (KILAUEA MILITARY CAMP ROAD J) |
| 0.004 | 0.026 | CURB | RIGHT | N/A |
| 0.006 | 0.051 | CURB | LEFT | N/A |
| 0.028 | 0.050 | CURB | RIGHT | N/A |
| 0.053 | 0.057 | CURB | LEFT | N/A |
| 0.054 | 0.054 | SIGN | LEFT | REGULATORY, ONE WAY |
| 0.058 | 0.058 | INTERSECTION | LEFT | ROUTE 0937CZ (KILAUEA MILITARY CAMP PARKING C) |
| 0.061 | 0.061 | DROP INLET | RIGHT | N/A |
| 0.061 | 0.074 | CURB | RIGHT | N/A |
| 0.084 | 0.090 | CURB | RIGHT | N/A |
| 0.086 | 0.086 | INTERSECTION | LEFT | ROUTE 0937CZ (KILAUEA MILITARY CAMP PARKING C) |
| 0.090 | 0.090 | INTERSECTION | RIGHT | ROUTE 0215EZ (KILAUEA MILITARY CAMP ROAD E) |
| 0.090 | 0.090 | INTERSECTION | LEFT | ROUTE 0215EZ (KILAUEA MILITARY CAMP ROAD E) |
| 0.090 | 0.090 | ROUTE END | N/A | TO ROUTE 0215EZ (KILAUEA MILITARY CAMP ROAD E) |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0215HZ: KILAUEA MILITARY CAMP ROAD H

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|------------------|----------------|--------------|-------|--|
| 0.000 | 0.000 | ROUTE BEGIN | N/A | FROM ROUTE 0215DZ (KILAUEA MILITARY CAMP ROAD D) |
| 0.000 | 0.000 | INTERSECTION | RIGHT | ROUTE 0215DZ (KILAUEA MILITARY CAMP ROAD D) |
| 0.000 | 0.000 | INTERSECTION | LEFT | ROUTE 0215DZ (KILAUEA MILITARY CAMP ROAD D) |
| 0.007 | 0.007 | INTERSECTION | RIGHT | ROUTE 0937KZ (KILAUEA MILITARY CAMP PARKING K) |
| 0.007 | 0.007 | SIGN | LEFT | REGULATORY, STOP |
| 0.024 | 0.024 | INTERSECTION | RIGHT | ROUTE 0937KZ (KILAUEA MILITARY CAMP PARKING K) |
| 0.026 | 0.026 | INTERSECTION | LEFT | ROUTE 0215IZ (KILAUEA MILITARY CAMP ROAD I) |
| 0.027 | 0.032 | CURB | LEFT | N/A |
| 0.029 | 0.029 | SIGN | LEFT | WARNING, SLOW CHILDREN |
| 0.040 | 0.077 | CURB | LEFT | N/A |
| 0.062 | 0.062 | SIGN | RIGHT | GUIDE, UNABLE TO READ FROM VIDEO |
| 0.071 | 0.076 | CURB | RIGHT | N/A |
| 0.078 | 0.102 | CURB | RIGHT | N/A |
| 0.092 | 0.101 | CURB | LEFT | N/A |
| 0.103 | 0.103 | SIGN | RIGHT | REGULATORY, STOP |
| 0.106 | 0.106 | SIGN | LEFT | REGULATORY, STOP |
| 0.106 | 0.106 | INTERSECTION | LEFT | ROUTE 0215JZ (KILAUEA MILITARY CAMP ROAD J) |
| 0.106 | 0.106 | INTERSECTION | RIGHT | ROUTE 0215JZ (KILAUEA MILITARY CAMP ROAD J) |
| 0.107 | 0.112 | CURB | LEFT | N/A |
| 0.108 | 0.111 | CURB | RIGHT | N/A |
| 0.123 | 0.123 | INTERSECTION | RIGHT | ROUTE 0937EZ (KILAUEA MILITARY CAMP PARKING E) |
| 0.124 | 0.124 | INTERSECTION | LEFT | ROUTE 0937FZ (KILAUEA MILITARY CAMP PARKING F) |
| 0.124 | 0.124 | SIGN | RIGHT | REGULATORY, HANDICAPPED PARKING |
| 0.127 | 0.135 | CURB | LEFT | N/A |
| 0.137 | 0.158 | CURB | LEFT | N/A |
| 0.138 | 0.138 | SIGN | RIGHT | REGULATORY, STOP |
| 0.145 | 0.145 | INTERSECTION | RIGHT | ROUTE 0937CZ (KILAUEA MILITARY CAMP PARKING C) |
| 0.145 | 0.175 | CURB | RIGHT | N/A |
| 0.158 | 0.175 | CURB | LEFT | N/A |
| 0.176 | 0.176 | SIGN | RIGHT | REGULATORY, YIELD |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0215HZ: KILAUEA MILITARY CAMP ROAD H

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|--------------------------|------------------------|----------------|-------------|--|
| 0.178 | 0.178 | INTERSECTION | N/A | ROUTE 0215FZ (KILAUEA MILITARY CAMP ROAD F) |
| 0.178 | 0.178 | ROUTE END | N/A | TO ROUTE 0215FZ (KILAUEA MILITARY CAMP ROAD F) |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0215IZ: KILAUEA MILITARY CAMP ROAD I

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|------------------|----------------|--------------|-------|--|
| 0.000 | 0.000 | ROUTE BEGIN | N/A | FROM ROUTE 0215FZ (KILAUEA MILITARY CAMP ROAD F) |
| 0.000 | 0.000 | INTERSECTION | LEFT | ROUTE 0215FZ (KILAUEA MILITARY CAMP ROAD F) |
| 0.000 | 0.000 | INTERSECTION | RIGHT | ROUTE 0215FZ (KILAUEA MILITARY CAMP ROAD F) |
| 0.006 | 0.019 | CURB | LEFT | N/A |
| 0.011 | 0.015 | CURB | RIGHT | N/A |
| 0.015 | 0.064 | CURB | RIGHT | N/A |
| 0.020 | 0.034 | CURB | LEFT | N/A |
| 0.041 | 0.041 | DROP INLET | RIGHT | N/A |
| 0.042 | 0.090 | CURB | LEFT | N/A |
| 0.067 | 0.090 | CURB | RIGHT | N/A |
| 0.091 | 0.091 | INTERSECTION | LEFT | ROUTE 0215JZ (KILAUEA MILITARY CAMP ROAD J) |
| 0.091 | 0.091 | INTERSECTION | RIGHT | ROUTE 0215JZ (KILAUEA MILITARY CAMP ROAD J) |
| 0.092 | 0.126 | CURB | LEFT | N/A |
| 0.093 | 0.129 | CURB | RIGHT | N/A |
| 0.129 | 0.131 | CURB | LEFT | N/A |
| 0.132 | 0.132 | INTERSECTION | LEFT | ROUTE 0215HZ (KILAUEA MILITARY CAMP ROAD H) |
| 0.132 | 0.132 | SIGN | RIGHT | REGULATORY, STOP |
| 0.132 | 0.132 | INTERSECTION | N/A | ROUTE 0937KZ (KILAUEA MILITARY CAMP PARKING K) |
| 0.132 | 0.132 | INTERSECTION | RIGHT | ROUTE 0215HZ (KILAUEA MILITARY CAMP ROAD H) |
| 0.132 | 0.132 | ROUTE END | N/A | TO ROUTE 0215HZ (KILAUEA MILITARY CAMP ROAD H) |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0215JZ: KILAUEA MILITARY CAMP ROAD J

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|---------------|-------------|--------------|-------|--|
| 0.000 | 0.000 | ROUTE BEGIN | N/A | FROM ROUTE 0215DZ (KILAUEA MILITARY CAMP ROAD D) |
| 0.000 | 0.000 | INTERSECTION | LEFT | ROUTE 0215DZ (KILAUEA MILITARY CAMP ROAD D) |
| 0.000 | 0.000 | INTERSECTION | RIGHT | ROUTE 0215DZ (KILAUEA MILITARY CAMP ROAD D) |
| 0.004 | 0.004 | SIGN | LEFT | REGULATORY, STOP |
| 0.021 | 0.021 | SIGN | RIGHT | REGULATORY, STOP |
| 0.021 | 0.021 | SIGN | RIGHT | WARNING, SLOW CHILDREN PLAYING |
| 0.027 | 0.027 | INTERSECTION | LEFT | ROUTE 0215IZ (KILAUEA MILITARY CAMP ROAD I) |
| 0.027 | 0.027 | INTERSECTION | RIGHT | ROUTE 0215IZ (KILAUEA MILITARY CAMP ROAD I) |
| 0.028 | 0.041 | CURB | RIGHT | N/A |
| 0.031 | 0.063 | CURB | LEFT | N/A |
| 0.046 | 0.069 | CURB | RIGHT | N/A |
| 0.070 | 0.070 | INTERSECTION | RIGHT | ROUTE 0215HZ (KILAUEA MILITARY CAMP ROAD H) |
| 0.070 | 0.070 | INTERSECTION | LEFT | ROUTE 0215HZ (KILAUEA MILITARY CAMP ROAD H) |
| 0.075 | 0.079 | CURB | LEFT | N/A |
| 0.076 | 0.084 | CURB | RIGHT | N/A |
| 0.086 | 0.096 | CURB | RIGHT | N/A |
| 0.093 | 0.093 | INTERSECTION | LEFT | ROUTE 0937IZ (KILAUEA MILITARY CAMP PARKING I) |
| 0.093 | 0.093 | SIGN | RIGHT | REGULATORY, SPEED LIMIT 5 |
| 0.093 | 0.093 | SIGN | RIGHT | WARNING, SLOW CHILDREN PLAYING |
| 0.097 | 0.118 | CURB | LEFT | N/A |
| 0.110 | 0.110 | INTERSECTION | RIGHT | ROUTE 0937HZ (KILAUEA MILITARY CAMP PARKING H) |
| 0.121 | 0.161 | CURB | RIGHT | N/A |
| 0.122 | 0.151 | CURB | LEFT | N/A |
| 0.129 | 0.129 | SIGN | LEFT | REGULATORY, SPEED LIMIT 5 |
| 0.129 | 0.129 | SIGN | LEFT | WARNING, SLOW CHILDREN PLAYING |
| 0.151 | 0.151 | SIGN | LEFT | REGULATORY, ONE WAY |
| 0.151 | 0.151 | SIGN | LEFT | REGULATORY, SPEED LIMIT 15 M.P.H. |
| 0.162 | 0.172 | CURB | LEFT | N/A |
| 0.162 | 0.162 | INTERSECTION | LEFT | ROUTE 0215GZ (KILAUEA MILITARY CAMP ROAD G) |
| 0.165 | 0.165 | SIGN | RIGHT | REGULATORY, STOP |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0215JZ: KILAUEA MILITARY CAMP ROAD J

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|--------------------------|------------------------|----------------|-------------|--|
| 0.165 | 0.165 | SIGN | RIGHT | WARNING, SLOW CHILDREN PLAYING |
| 0.173 | 0.173 | INTERSECTION | RIGHT | ROUTE 0215KZ (KILAUEA MILITARY CAMP ROAD K) |
| 0.179 | 0.179 | INTERSECTION | LEFT | ROUTE 0937BZ (KILAUEA MILITARY CAMP PARKING B) |
| 0.180 | 0.180 | INTERSECTION | LEFT | ROUTE 0214 (KILAUEA MILITARY CAMP ROAD) |
| 0.180 | 0.180 | INTERSECTION | RIGHT | ROUTE 0214 (KILAUEA MILITARY CAMP ROAD) |
| 0.180 | 0.180 | ROUTE END | N/A | TO ROUTE 0214 (KILAUEA MILITARY CAMP ROAD) |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0215KZ: KILAUEA MILITARY CAMP ROAD K

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|--------------------------|------------------------|----------------|-------------|--|
| 0.000 | 0.000 | ROUTE BEGIN | N/A | FROM ROUTE 0215JZ (KILAUEA MILITARY CAMP ROAD J) |
| 0.000 | 0.000 | INTERSECTION | RIGHT | ROUTE 0215JZ (KILAUEA MILITARY CAMP ROAD J) |
| 0.000 | 0.000 | INTERSECTION | N/A | ROUTE 0937BZ (KILAUEA MILITARY CAMP PARKING B) |
| 0.000 | 0.000 | INTERSECTION | LEFT | ROUTE 0215JZ (KILAUEA MILITARY CAMP ROAD J) |
| 0.008 | 0.008 | SIGN | LEFT | REGULATORY, STOP |
| 0.033 | 0.033 | DROP INLET | N/A | N/A |
| 0.033 | 0.033 | INTERSECTION | RIGHT | ROUTE 0937NZ (KILAUEA MILITARY CAMP PARKING N) |
| 0.049 | 0.049 | SIGN | RIGHT | REGULATORY, SPEED LIMIT 15 M.P.H. |
| 0.049 | 0.049 | SIGN | RIGHT | WARNING, CAUTION PEDESTRIAN TRAFFIC |
| 0.098 | 0.098 | INTERSECTION | LEFT | ROUTE 0937JZ (KILAUEA MILITARY CAMP PARKING J) |
| 0.123 | 0.123 | INTERSECTION | RIGHT | ROUTE 0937OZ (KILAUEA MILITARY CAMP PARKING O) |
| 0.176 | 0.176 | INTERSECTION | LEFT | ROUTE 0418 (KILAUEA MILITARY CAMP WATER TANK ROAD) |
| 0.180 | 0.180 | INTERSECTION | RIGHT | ROUTE 0937OZ (KILAUEA MILITARY CAMP PARKING O) |
| 0.193 | 0.193 | INTERSECTION | LEFT | ROUTE 0215DZ (KILAUEA MILITARY CAMP ROAD D) |
| 0.206 | 0.206 | INTERSECTION | LEFT | ROUTE 0215LZ (KILAUEA MILITARY CAMP ROAD L) |
| 0.225 | 0.225 | INTERSECTION | N/A | ROUTE 0937KZ (KILAUEA MILITARY CAMP PARKING K) |
| 0.225 | 0.225 | ROUTE END | N/A | TO ROUTE 0937KZ (KILAUEA MILITARY CAMP PARKING K) |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0215LZ: KILAUEA MILITARY CAMP ROAD L

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|--------------------------|------------------------|----------------|-------------|--|
| 0.000 | 0.000 | ROUTE BEGIN | N/A | FROM ROUTE 0215DZ (KILAUEA MILITARY CAMP ROAD D) |
| 0.000 | 0.000 | INTERSECTION | RIGHT | ROUTE 0215DZ (KILAUEA MILITARY CAMP ROAD D) |
| 0.000 | 0.000 | INTERSECTION | LEFT | ROUTE 0215DZ (KILAUEA MILITARY CAMP ROAD D) |
| 0.020 | 0.020 | INTERSECTION | LEFT | ROUTE 0215KZ (KILAUEA MILITARY CAMP ROAD K) |
| 0.020 | 0.020 | INTERSECTION | RIGHT | ROUTE 0215KZ (KILAUEA MILITARY CAMP ROAD K) |
| 0.020 | 0.020 | ROUTE END | N/A | TO ROUTE 0215KZ (KILAUEA MILITARY CAMP ROAD K) |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0400: WATER TANK ROAD

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|---------------|-------------|--------------|-------|---|
| 0.000 | 0.000 | ROUTE BEGIN | N/A | FROM ROUTE 0010 (CRATER RIM DRIVE) AT MP 0.35 ON RIGHT |
| 0.000 | 0.000 | INTERSECTION | RIGHT | ROUTE 0010 (CRATER RIM DRIVE) |
| 0.000 | 0.000 | INTERSECTION | N/A | ROUTE 0904 (VOLCANO HOUSE PARKING) |
| 0.000 | 0.000 | INTERSECTION | LEFT | ROUTE 0010 (CRATER RIM DRIVE) |
| 0.000 | 0.000 | SIGN | LEFT | GUIDE, VOLCANO HOUSE |
| 0.001 | 0.001 | SIGN | LEFT | REGULATORY, ONE WAY |
| 0.007 | 0.007 | SIGN | LEFT | REGULATORY, STOP |
| 0.014 | 0.014 | INTERSECTION | RIGHT | ROUTE 0900AZ (KILAUEA VISITORS CENTER PARKING AREA A) |
| 0.015 | 0.015 | SIGN | RIGHT | GUIDE, SERVICE ROAD EMPLOYEES ONLY |
| 0.015 | 0.019 | CURB | RIGHT | N/A |
| 0.022 | 0.027 | CURB | RIGHT | N/A |
| 0.034 | 0.034 | SIGN | RIGHT | GUIDE, VOLCANO ART CENTER |
| 0.051 | 0.051 | INTERSECTION | RIGHT | ROUTE 0941 (VOLCANO ART CENTER HANDICAP PARKING) |
| 0.130 | 0.130 | SIGN | LEFT | REGULATORY, SPEED LIMIT 5 |
| 0.131 | 0.131 | GATE | N/A | N/A |
| 0.131 | 0.131 | SIGN | RIGHT | REGULATORY, KEEP GATE CLOSED AUTHORIZED PERSONNEL ONLY CALL 985-6001 FOR ACCESS |
| 0.139 | 0.139 | INTERSECTION | RIGHT | PAVED ROUTE |
| 0.164 | 0.164 | SIGN | RIGHT | WARNING, CAUTION HARD HAT AREA |
| 0.180 | 0.180 | SIGN | RIGHT | REGULATORY, NO SMOKING |
| 0.204 | 0.204 | INTERSECTION | LEFT | UNPAVED PARKING (GRAVEL PILE) |
| 0.210 | 0.210 | INTERSECTION | LEFT | ROUTE 0416AZ (KILAUEA WATER TANKS AREA ROAD A) |
| 0.256 | 0.256 | INTERSECTION | LEFT | ROUTE 0416AZ (KILAUEA WATER TANKS AREA ROAD A) |
| 0.256 | 0.256 | INTERSECTION | RIGHT | ROUTE 0416AZ (KILAUEA WATER TANKS AREA ROAD A) |
| 0.306 | 0.306 | INTERSECTION | LEFT | UNPAVED PARKING |
| 0.330 | 0.330 | GATE | N/A | N/A |
| 0.333 | 0.333 | SIGN | LEFT | REGULATORY, DO NOT ENTER |
| 0.339 | 0.339 | INTERSECTION | LEFT | ROUTE 5011 (HAWAII STATE ROUTE 11 (HAWAII BELT ROAD / MAMALAHOA HIGHWAY)) |
| 0.339 | 0.339 | SIGN | RIGHT | REGULATORY, STOP |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0400: WATER TANK ROAD

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|--------------------------|------------------------|----------------|-------------|---|
| 0.339 | 0.339 | INTERSECTION | RIGHT | ROUTE 5011 (HAWAII STATE ROUTE 11 (HAWAII BELT ROAD / MAMALAHOA HIGHWAY)) |
| 0.339 | 0.339 | ROUTE END | N/A | TO ROUTE 5011 (HAWAII STATE ROUTE 11 (HAWAII BELT ROAD / MAMALAHOA HIGHWAY)) AT MP 1.37 ON LEFT |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0401: NORTH RESIDENCE ROAD

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|---------------|-------------|------------------|-------|--|
| 0.000 | 0.000 | ROUTE BEGIN | N/A | FROM ROUTE 0010 (CRATER RIM DRIVE) AT MP 0.26 ON LEFT |
| 0.000 | 0.000 | INTERSECTION | LEFT | ROUTE 0010 (CRATER RIM DRIVE) |
| 0.000 | 0.000 | INTERSECTION | N/A | ROUTE 0013 (OFFICE AREA STREET) |
| 0.000 | 0.000 | INTERSECTION | RIGHT | ROUTE 0010 (CRATER RIM DRIVE) |
| 0.006 | 0.006 | SIGN | LEFT | REGULATORY, STOP |
| 0.009 | 0.009 | SIGN | RIGHT | GUIDE, HIGHWAY 11 BACKCOUNTRY OFFICE JAGGAR MUSEUM |
| 0.009 | 0.009 | SIGN | RIGHT | GUIDE, SERVICE ROAD EMPLOYEES ONLY |
| 0.035 | 0.035 | INTERSECTION | RIGHT | ROUTE 0905 (OHIA WING PARKING) |
| 0.055 | 0.061 | CURB | RIGHT | N/A |
| 0.064 | 0.064 | SIGN | RIGHT | REGULATORY, DO NOT ENTER |
| 0.064 | 0.064 | SIGN | RIGHT | REGULATORY, EXIT ONLY |
| 0.065 | 0.065 | SIGN | RIGHT | GUIDE, UNABLE TO READ FROM VIDEO |
| 0.067 | 0.067 | INTERSECTION | RIGHT | ROUTE 0904 (VOLCANO HOUSE PARKING) |
| 0.070 | 0.070 | SIGN | RIGHT | REGULATORY, DO NOT ENTER |
| 0.079 | 0.079 | SIGN | RIGHT | REGULATORY, NO PARKING |
| 0.088 | 0.088 | INTERSECTION | RIGHT | ROUTE 0906 (VOLCANO HOUSE HOTEL SERVICE AREA BLDG #B167) |
| 0.090 | 0.096 | GUARD/GUIDE WALL | RIGHT | N/A |
| 0.094 | 0.094 | SIGN | N/A | REGULATORY, NO PARKING ANY TIME |
| 0.096 | 0.096 | SIGN | N/A | GUIDE, UNABLE TO READ FROM VIDEO |
| 0.096 | 0.096 | SIGN | N/A | GUIDE, UNABLE TO READ FROM VIDEO |
| 0.105 | 0.105 | SIGN | LEFT | REGULATORY, STOP |
| 0.105 | 0.105 | SIGN | RIGHT | REGULATORY, SPEED LIMIT 15 |
| 0.117 | 0.117 | INTERSECTION | RIGHT | ROUTE 0907 (BUILDING #2 PARKING) |
| 0.129 | 0.129 | SIGN | RIGHT | WARNING, SLOW SPEED BREAKER AHEAD |
| 0.181 | 0.181 | INTERSECTION | RIGHT | ROUTE 0908FZ (RESIDENCE ROAD PARKING A) |
| 0.192 | 0.192 | INTERSECTION | RIGHT | ROUTE 0924 (OLD PLAYGROUND PARKING LOT) |
| 0.199 | 0.199 | INTERSECTION | RIGHT | ROUTE 0908GZ (RESIDENCE ROAD PARKING B) |
| 0.259 | 0.259 | INTERSECTION | RIGHT | ROUTE 0403 (SOUTH RESIDENCE LOOP) |
| 0.271 | 0.271 | GATE | N/A | N/A |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0401: NORTH RESIDENCE ROAD

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|--------------------------|------------------------|----------------|-------------|--|
| 0.274 | 0.274 | SIGN | LEFT | REGULATORY, SPEED LIMIT 15 |
| 0.306 | 0.306 | INTERSECTION | RIGHT | ROUTE 0908AZ (KILAUEA MAINTENANCE YARD PARKING A) |
| 0.315 | 0.315 | INTERSECTION | LEFT | ROUTE 0908CZ (KILAUEA MAINTENANCE YARD PARKING C) |
| 0.327 | 0.327 | INTERSECTION | RIGHT | ROUTE 0908AZ (KILAUEA MAINTENANCE YARD PARKING A) |
| 0.345 | 0.345 | INTERSECTION | RIGHT | ROUTE 0908BZ (KILAUEA MAINTENANCE YARD PARKING B) |
| 0.359 | 0.359 | INTERSECTION | RIGHT | ROUTE 0908EZ (KILAUEA MAINTENANCE YARD PARKING E) |
| 0.383 | 0.383 | SIGN | LEFT | GUIDE, SERVICE ROAD EMPLOYEES ONLY |
| 0.389 | 0.389 | INTERSECTION | RIGHT | ROUTE 0908D (VISITORS EMERGENCY OPERATIONS CENTER PARKING) |
| 0.396 | 0.396 | SIGN | LEFT | GUIDE, BACKCOUNTRY OFFICE PARKING |
| 0.398 | 0.398 | SIGN | RIGHT | REGULATORY, FASTEN SEAT BELTS |
| 0.407 | 0.407 | GATE | N/A | N/A |
| 0.414 | 0.414 | SIGN | LEFT | REGULATORY, SPEED LIMIT 15 |
| 0.425 | 0.425 | SIGN | RIGHT | REGULATORY, STOP |
| 0.428 | 0.428 | INTERSECTION | LEFT | ROUTE 0010 (CRATER RIM DRIVE) |
| 0.428 | 0.428 | INTERSECTION | RIGHT | ROUTE 0010 (CRATER RIM DRIVE) |
| 0.428 | 0.428 | ROUTE END | N/A | TO ROUTE 0010 (CRATER RIM DRIVE) AT MP 10.48 ON LEFT |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0403: SOUTH RESIDENCE LOOP

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|--------------------------|------------------------|----------------|-------------|--|
| 0.000 | 0.000 | ROUTE BEGIN | N/A | FROM ROUTE 0401 (NORTH RESIDENCE ROAD) |
| 0.000 | 0.000 | INTERSECTION | RIGHT | ROUTE 0401 (NORTH RESIDENCE ROAD) |
| 0.000 | 0.000 | INTERSECTION | LEFT | ROUTE 0401 (NORTH RESIDENCE ROAD) |
| 0.007 | 0.007 | SIGN | LEFT | REGULATORY, STOP |
| 0.014 | 0.014 | SIGN | RIGHT | REGULATORY, SPEED LIMIT 15 |
| 0.067 | 0.067 | INTERSECTION | LEFT | ROUTE 0403 (SOUTH RESIDENCE LOOP) |
| 0.143 | 0.143 | INTERSECTION | RIGHT | ROUTE 0926 (ENVIRONMENTAL EDUCATION CENTER PARKING) |
| 0.419 | 0.419 | SIGN | RIGHT | REGULATORY, YIELD |
| 0.424 | 0.424 | INTERSECTION | LEFT | ROUTE 0403 (SOUTH RESIDENCE LOOP) |
| 0.424 | 0.424 | INTERSECTION | N/A | ROUTE 0403 (SOUTH RESIDENCE LOOP) |
| 0.424 | 0.424 | ROUTE END | N/A | TO END OF LOOP |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0405: AINAHOU ROAD

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|--------------------------|------------------------|----------------|-------------|---|
| 0.000 | 0.000 | ROUTE BEGIN | N/A | FROM ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 4.30 ON RIGHT |
| 0.000 | 0.000 | INTERSECTION | LEFT | ROUTE 0012 (CHAIN OF CRATERS ROAD) |
| 0.000 | 0.000 | INTERSECTION | RIGHT | ROUTE 0012 (CHAIN OF CRATERS ROAD) |
| 0.025 | 0.025 | SIGN | LEFT | REGULATORY, STOP |
| 0.055 | 0.055 | INTERSECTION | N/A | ROUTE 0405 (AINAHOU ROAD) UNPAVED SECTION |
| 0.055 | 0.055 | ROUTE END | N/A | TO TRAILHEAD AT RANCH HOUSE AT MP 2.06 |

HAVO: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0409: RESOURCE MANAGEMENT ROAD

Notice: Culverts and drop inlets were marked by NPS and inventoried by RIP in Cycle 5 on all paved routes.

| FROM MILEPOST | TO MILEPOST | FEATURE | SIDE | COMMENT |
|--------------------------|------------------------|----------------|-------------|--|
| 0.000 | 0.000 | ROUTE BEGIN | N/A | FROM ROUTE 0010 (CRATER RIM DRIVE) AT MP 10.10 ON LEFT |
| 0.000 | 0.000 | INTERSECTION | N/A | ROUTE 0010 (CRATER RIM DRIVE) |
| 0.000 | 0.000 | INTERSECTION | RIGHT | ROUTE 0010 (CRATER RIM DRIVE) |
| 0.015 | 0.015 | SIGN | LEFT | REGULATORY, STOP |
| 0.015 | 0.015 | SIGN | LEFT | WARNING, GRAPHIC SIGN NO TEXT |
| 0.015 | 0.015 | SIGN | LEFT | WARNING, STOP AHEAD |
| 0.016 | 0.016 | SIGN | RIGHT | WARNING, ROAD CLOSED AHEAD |
| 0.051 | 0.051 | SIGN | RIGHT | REGULATORY, SPEED LIMIT 15 |
| 0.085 | 0.085 | SIGN | RIGHT | WARNING, WATCH FOR PEDESTRIANS |
| 0.249 | 0.249 | INTERSECTION | RIGHT | UNPAVED ROUTE |
| 0.253 | 0.253 | SIGN | RIGHT | GUIDE, SERVICE ROAD EMPLOYEES ONLY |
| 0.266 | 0.266 | GATE | N/A | N/A |
| 0.266 | 0.266 | SIGN | RIGHT | REGULATORY, SPEED LIMIT 15 |
| 0.473 | 0.473 | INTERSECTION | N/A | ROUTE 0917 (RESOURCE MANAGEMENT AREA PARKING) |
| 0.473 | 0.473 | ROUTE END | N/A | TO ROUTE 0917 (RESOURCE MANAGEMENT AREA PARKING) |

Section 10 Appendix



Hawaii Volcanoes National Park



Federal Lands Highway
Road Inventory Program

Explanation of Changes to the RIP Index Equations and Determination of PCR

In 2005, the FHWA began implementing the use of a Pavement Management System to assist the National Park Service in prioritizing Pavement Maintenance and Rehabilitation activities. The PMS used by FHWA is the Highway Pavement Management Application (HPMA) and this software has the ability to store inventory and condition data from RIP and forecast future performance using prediction models. Outputs include performance and condition reports at the National, Region, Park, or Route level. A regional prioritized list and optimization have been produced for most regions and the Federal Highway Deferred Maintenance is calculated via the HPMA as well.

In an effort to improve the accuracy of treatment recommendations and pavement condition descriptions in relation to the distresses and indexes that comprise the Pavement Condition Rating (PCR), an extensive study was completed throughout 2010 that resulted in changes to the Road Inventory Program condition reporting method and specifically, the calculation of PCR. It was determined that a better representation of PCR could be achieved by modifying the relative impact certain distresses would have on the overall rating.

Through the use of HPMA data, it was noted that false failure indicators existed with the existing PCR model, and that it would be necessary to reduce their impact. The distresses affected in this way were Rutting and Roughness. Conversely, experience showed that roadways with extensive cracking present were often shown to have a high PCR. Therefore, the crack index models were adjusted to be more sensitive to changes in crack severity or quantity. It was also determined that these issues were not due to a problem with data acquisition (i.e. the RIP “van”), but with the way the collected data was processed. The final change was to provide guidance on when to use the Roughness Condition Index (RCI) in the PCR calculation. Roughness data is of little value to determining overall condition on routes that, due to their length or geometrics, have lower vehicle operating speeds. Therefore, in Cycle 5, only routes that have lengths of one half mile or greater and posted speed limits of 25 mph or greater will have RCI reported and included in the PCR calculations.

The changes that were implemented were endorsed by management at both the FHWA and NPS. In order to show the effectiveness of these changes, several sites were ground truth tested to ensure that an improvement was achieved between the relationship of PCR and the actual Maintenance and Rehabilitation needs that were represented. These changes will allow greater use of RIP and HPMA data for not simply condition data reporting, but also as a reliable tool for project identification and selection.

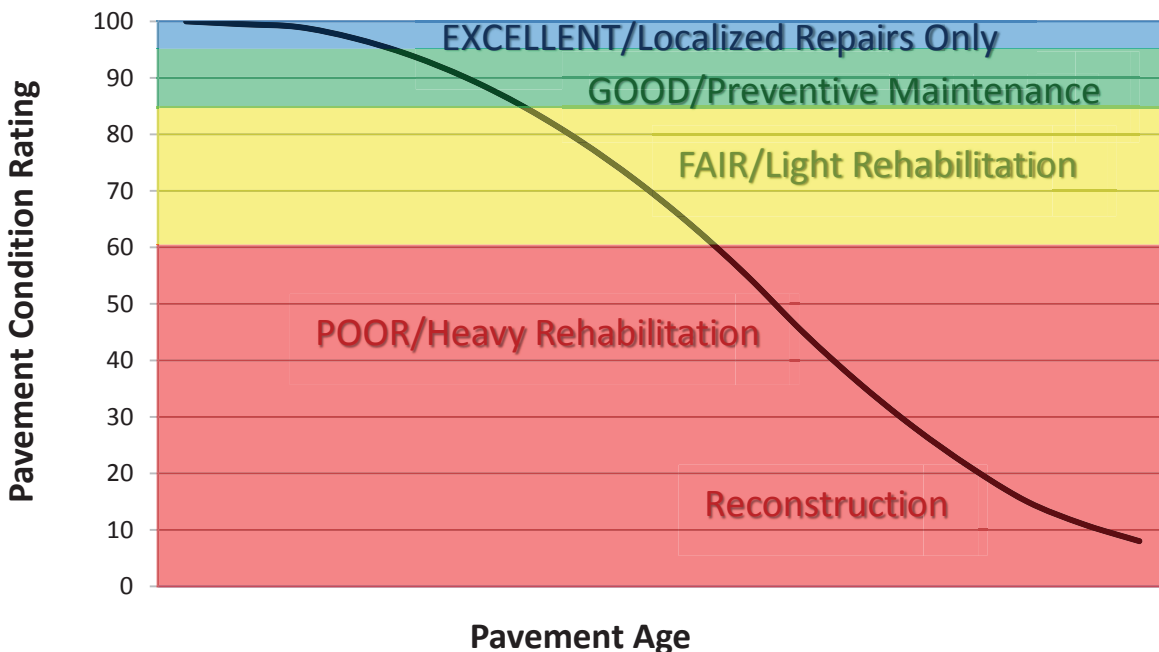
Explanation of the Condition Descriptions

The Pavement Condition Rating (PCR) can be used to indicate the place in the Pavement Life Cycle and the types of treatments that should be considered now and into the future.

- Excellent/New: PCR of 95-100. Pavements in this range will require only spot repairs
- Good: PCR of 85-94. Pavements in this range will likely be candidates for Preventive Maintenance. Examples include Chip and Slurry Seals, Micro Surfacing and Thin Overlays.
- Fair: PCR of 61-84. Pavements in this range will likely be candidates of Light Rehabilitation (L3R). Examples include single-lift overlays up to 2.5 inches in total thickness, milling and overlays.
- Poor: PCR of 60 or below. Pavements in this range will likely be candidates of Heavy Rehabilitation or Reconstruction (H3R or 4R). Examples include Pulverization, Multiple Lift Overlays, and Reconstruction.

At this time, specific Maintenance and Rehabilitation activities should be evaluated and recommended at the project level. Site-specific conditions that influence treatment type should be determined based on performing a subsurface investigation and/or pavement condition survey, and not be based solely on RIP data. Additionally, RIP produces a snapshot of conditions the year in which the data was collected. For further information or to obtain additional Pavement Management System's data from our Highway Pavement Management Application (HPMA) please contact the Eastern Federal Lands pavement team.

Condition Categories and Treatments



Description of Pavement Treatment Types

1. Preventive Maintenance is a planned strategy of cost-effective treatments to an existing roadway system and its appurtenances that preserves the system, retards future deterioration, and maintains or improves the functional condition of the system (without significantly increasing the structural capacity). Preventive maintenance is typically applied to pavements in good condition having significant remaining service life. As a major component of pavement preservation, preventive maintenance is a strategy of extending the service life by applying cost-effective treatments to the surface or near-surface of structurally sound pavements. Examples of preventive treatments include asphalt crack sealing, chip sealing, slurry or micro-surfacing, thin and ultra-thin hot-mix asphalt overlay, concrete joint sealing, diamond grinding, dowel-bar retrofit, and isolated, partial and/or full-depth concrete repairs to restore functionality of individual slabs.
2. Pavement Rehabilitation consists of structural enhancements that extend the service life of an existing pavement and/or improve its load carrying capacity. Rehabilitation techniques include restoration treatments and structural overlays. Rehabilitation projects extend the life of existing pavement structures either by restoring existing structural capacity through the elimination of age-related, environmental cracking of embrittled pavement surface or by increasing pavement thickness to strengthen existing pavement sections to accommodate existing or projected traffic loading conditions. Two sub-categories result from these distinctions, which are directly related to the restoration or increase of structural capacity.
 - **Light Rehabilitation (L3R)** - Examples include single-lift overlays up to 2.5 inches in total thickness and milling and overlays for flexible pavements
 - **Heavy Rehabilitation (H3R)** – Requires rehabilitation with grade improvement. H3R stands for resurfacing, restoration, and rehabilitation projects. H3R projects typically involve multi-depth (overlays > 2.5 inches) pavement improvement work (short of full-depth replacement) and targeted safety improvements. H3R projects generally involve retention of the existing three-dimensional alignment.
3. Reconstruction (4R) is defined as the replacement of the entire existing pavement structure by the placement of the equivalent or increased pavement structure. Reconstruction usually requires the complete removal and replacement of the existing pavement structure. Reconstruction may utilize either new or recycled materials incorporated into the materials used for the reconstruction of the complete pavement section. Reconstruction is required when a pavement has either failed or has become functionally obsolete.

Description of Automated Vehicle Ratings

DESCRIPTION OF RATING SYSTEM

The Federal Highway Administration (FHWA), National Park Service Road Inventory Program (NPS-RIP), collects condition data on paved roads, parkways, and parking areas in park units nationwide. Road surface condition data is collected using an automated Data Collection Vehicle (DCV). Roads having brick, cobblestone, or wood surfaces are not normally surveyed with the DCV, but are manually rated for the purpose of assigning a condition rating. Unpaved roads, parkways, and parking areas are not currently being evaluated for condition. Paved campground pads and driveways are also not currently being evaluated for condition.

The FHWA RIP is implemented based on the premise that an accurate pavement surface condition assessment can be accomplished using automated crack detection technology as applied to digital images. Various methods of pavement condition assessment have been developed over the years with varying degrees of accuracy and acceptance. The use of digital photography to record pavement images and subsequent crack detection and classification has undergone continuous improvements over the past decade. Digital cameras with increasingly superior resolution and high definition have become more affordable, and the proprietary programming code and algorithms have been improved in crack detection software.

With the use of high quality digital photography and automated crack detection software, FHWA RIP is tasked with executing a pavement condition assessment on about 5000 miles of National Park Service roads and parkways. Foremost in setting up the basis of pavement distress identification is employing the distress identification protocols used by FHWA. There is no single distress identification system that is universal among entities conducting a program of distress identification. For the purpose of the NPS-RIP, FHWA employs distress identification protocols that are specific to this program.

FHWA has referenced the “*Distress Identification Manual for the Long-Term Pavement Performance Program*”, Publication No. FHWA-RD 03-031, June 2003, as the point-of-reference for distress types on NPS pavement. The FHWA RIP distress types are similar to those described in the LTPP manual with some modifications. The document, “*Distress Identification Manual for the NPS Road Inventory Program, Cycle 5, 2010-2013*” was developed using the “*Distress Identification Manual for the Long-Term Pavement Performance Program*” as a guideline. Definitions of severity levels based on crack width contained in this document adhere to the LTPP Distress ID Manual. Modifications have been made to the definition of Alligator and Longitudinal Cracking and determination of Alligator Cracking severity. This manual also addresses Rutting and Roughness and its application to NPS-RIP.

In 2010, FHWA RIP began the fifth cycle of data collection in national parks. For Cycle 5, data will be collected in approximately 81 large parks (10 or more paved route miles) on Functional Class 1, 2, and 7 routes plus any new routes or parking areas previously not collected, totaling an estimated 4,459 paved route miles. Additionally, 231 small parks will be collected comprising approximately 529 paved route miles and associated paved parking areas. The data is used to support the National Park Service road maintenance program and Pavement Management System (PMS) developed and maintained by FHWA.

This “*Distress Identification Manual for the NPS Road Inventory Program, Cycle 5, 2010-2013*” will be used as a reference resource in crack detection and classification, determination of distress severity and extent, and in the calculation of distress index values for the FHWA RIP Cycle 5.

SURFACE DISTRESSES

Surface Condition Rating - SCR

Surface distresses are measured in the primary lane only. In the classification and measurement of all paved surface condition data, results will be reported in the database in record intervals of 0.02 miles (105.6 feet) (smallest granularity) along the route.

Surface distresses determined from digital images

- Transverse Cracks
- Longitudinal Cracks
- Alligator Cracks
- Patching/Potholes

Surface distress measured by DCV (Data Collection Vehicle) LRMS (Laser Rut Measuring System)

- Rutting

Each of the five surface distresses is assigned a computed surface distress index

- Transverse Crack Index
- Longitudinal Crack Index
- Alligator Crack Index
- Patching/Pothole Index
- Rutting Index

Surface distress data are classified as listed above, measured for severity, and quantified for extent. Classification, severity, and extent of these five surface distresses comprise the three main elements for calculation of SCR (Surface Condition Rating).

In addition to the five surface distresses, a **Structural Crack Index** is computed, which is a combination of the Longitudinal Crack Index and the Alligator Crack Index. The Structural Crack Index is then used in lieu of the LC and AC indices to compute SCR.

Roughness Condition Index - RCI

Additional condition data measured by DCV (lasers and accelerometers)

- Roughness (IRI)

Roughness is measured by FHWA's DCV and reported as International Roughness Index (IRI) in inches/mile. Using IRI, the Roughness Condition Index (RCI) is computed.

Pavement Condition Rating - PCR

Using the SCR (computed from the five surface distresses) and the RCI, an overall Pavement Condition Rating (PCR) is computed. The formula for PCR is:

$$\text{Asphalt PCR} = (0.60 * \text{SCR}) + (0.40 * \text{RCI})$$

$$\text{Concrete PCR} = \text{RCI}$$

A detailed description of each distress index formula, roughness index formula, SCR and PCR is provided in this document beginning on page 8.

Each classified surface distress will fall into one or more *severity*...LOW, MEDIUM, or HIGH based on criteria listed. For each severity, an *extent* is established based on the measured quantity of the distress within that severity. Within each *severity* individual distresses are assigned a *Maximum Allowable Extent* (MAE). For example, LOW severity transverse cracking may be allowed up to 21.1 cracks within a 0.02 interval before it reaches MAE and fails.

The index formulas are based on a scale of 0-100. A PCR index value of 100 would indicate a “new” road with no measurable distresses or rough ride. A PCR value of 60 is determined to be *terminable serviceability* and the road is considered failed. The range of index values with condition descriptors is:

POOR (<=60), FAIR (61 - 84), GOOD (85 - 94), EXCELLENT (95 - 100)

Index values are generally computed based on cumulative deducts of the measured severities. As shown in the index formulas below, as any single severity reaches or exceeds MAE, the index computes to a value of 60 or less, and the road fails for that 0.02 interval.

Note: As a result of a unique combination of measured surface distresses and IRI, index values occasionally compute to less than 0 or greater than 100. In this instance, an index value < 0 defaults to 0. Index values > 100 default to 100. For all indices, a higher value indicates a better road condition, and a lower value indicates a poorer road condition.

On the following page, Table 1 summarizes the different types of distresses measured.

TABLE 1: Distress Summary

| ASPHALT-SURFACED PAVEMENT DISTRESS TYPES with RUTTING and ROUGHNESS | | | | |
|--|---------------------------|---|---------------------------------|--|
| DISTRESS TYPE | UNIT OF MEASURE... | ...CONVERTED TO | DEFINED SEVERITY LEVELS? | MEASURED BY |
| Alligator Cracking | Square Feet | Percent of Lane Per 0.02 Mile | Yes | Digital Image Crack Detection Software |
| Transverse Cracking | Linear Feet | Number of Cracks Per 0.02 Mile | Yes | Digital Image Crack Detection Software |
| Longitudinal Cracking | Linear feet | Percent of Lane Length Per 0.02 Mile | Yes | Digital Image Crack Detection Software |
| Patching/Potholes | Square Feet | Percent of Lane Per 0.02 Mile | No | Digital Image Crack Detection Software |
| Rutting | Inches | Rut Depth Per 0.02 Mile | Yes | DCV – Laser Rut Measuring System (LRMS) |
| Roughness | IRI | *RCI Per 0.02 Mile | No | DCV – Lasers /Accelerometers |

***Note: Roughness is measured on concrete roadways, but surface distresses and rutting are not measured. For concrete, PCR = RCI**

ALLIGATOR CRACKING

Description

Alligator cracking is considered a combination of fatigue and block cracking. It is a series of interconnected cracks in various stages of development. Alligator cracking develops into a many-sided pattern that resembles chicken wire or alligator skin. It can occur anywhere in the road lane. Alligator cracking must have a quantifiable area.

Severity Levels

LOW

An area of cracks with no or very few interconnecting cracks and the cracks are not spalled. Cracks are ≤ 0.25 in (6mm) in mean width. Cracks in the pattern are no further apart than 1 foot (0.328 m). May be sealed cracks with sealant in good condition and a crack width that cannot be determined.

MEDIUM

An area of interconnected cracks that form a complete pattern. Cracks may be slightly spalled. Cracks are >0.25 in. (6 mm) and ≤ 0.75 in. (19 mm) or any crack with a mean width ≤ 19 mm and adjacent low severity cracking. Cracks in the pattern are no further apart than 6 in. (150 mm).

HIGH

An area of interconnected cracks forming a complete pattern. Cracks are moderately or severely spalled. Cracks are >0.75 in (19mm) or any crack with a mean width ≤ 0.75 in (19mm) and adjacent medium to high severity random cracking.

A combination of observed crack width and crack pattern is used to determine overall severity of alligator cracking. Based on above description of each severity, the highest level of crack width and crack pattern determines overall severity. Table 2 illustrates this.

TABLE 2: Alligator Crack Severity Levels

| ALLIGATOR CRACKING SEVERITY LEVELS | | Crack Pattern | | |
|---|------------|----------------------|------------|-------------|
| | | LOW | MED | HIGH |
| Crack Width | LOW | L | M | H |
| | MED | M | M | H |
| | HI | H | H | H |

LONGITUDINAL CRACKING

Description

Longitudinal cracking occurs predominantly parallel to the pavement centerline. It can occur anywhere within the lane. Longitudinal cracks occurring in the wheelpath may be noteworthy.

Severity Levels

LOW

Cracks with a mean width of < 0.25 in. (6 mm). Sealed cracks with sealant in good condition and a width that cannot be determined.

MED

Cracks with a mean width > 0.25 in. (6 mm) and ≤ 0.75 in. (19 mm). Also, any crack with a mean width < 0.75 in. (19 mm) and adjacent random low severity cracking.

HIGH

Cracks with a mean width > 0.75 in. (19 mm). Also, any crack with a mean width < 0.75 in. (19 mm) and adjacent random medium to high severity cracking.

TRANSVERSE CRACKING

Description

Transverse cracking occurs predominantly perpendicular to the pavement centerline. It can occur anywhere within the lane.

Severity Levels

LOW

Cracks with a mean width of < 0.25 in. (6 mm). Sealed cracks with sealant in good condition and a width that cannot be determined.

MED

Cracks with a mean width > 0.25 in. (6 mm) and ≤ 0.75 in. (19 mm). Also, any crack with a mean width < 0.75 in. (19 mm) and adjacent random low severity cracking.

HIGH

Cracks with a mean width > 0.75 in. (19 mm). Also, any crack with a mean width < 0.75 in. (19 mm) and adjacent random medium to high severity cracking.

PATCHING AND POTHOLES

Description

Patching is an area of pavement surface that has been removed and replaced with patching material or an area of pavement surface that has had additional patching material applied. Patching may encompass partial-lane or full-lane width. On full-lane width patching; the total, contiguous length of a patch may not exceed 0.30 mi. (0.48 km). Any full-lane width patch exceeding 0.30 mi. in length is considered a pavement change, not a patch for the purposes of distress analysis. Patching must have a quantifiable area.

Potholes are bowl-shaped holes of various sizes occurring in the pavement surface.

Severity Levels

There are no stratified severities for Patching/Potholes. They either are present or they are not.

RUTTING

Description

Rutting is a longitudinal surface depression in the wheelpath.

Severity Levels

LOW

Ruts with a measured depth $\geq 0.20''$ and $\leq 0.49''$

MED

Ruts with a measured depth $\geq 0.50''$ and $\leq 0.99''$

HIGH

Ruts with a measured depth $\geq 1.00''$

Ruts $< 0.20''$ are not included in the distress calculations.

ROUGHNESS

Description

Roughness is the measurement of the unevenness of the pavement in the direction of travel. It is measured in units of IRI (International Roughness Index), inches per mile, and is indicative of ride comfort.

Severity Levels

There are no stratified severity levels for roughness. The roughness (or smoothness) of a road surface can be defined by IRI in the following table.

TABLE 3: IRI

| IRI Descriptions | |
|-----------------------------------|--------------------------------|
| Type of Road | Typical IRI (in/mile) |
| New Road, no noticeable roughness | <90 |
| Small level of roughness | 90 – 126 |
| Road of average roughness | 126 – 190 |
| Road with above average roughness | 190 – 253 |
| Road with severe roughness | 253 – 380 |
| Nearly impassable | >380 |

INDEX FORMULAS

Note: All index formulas listed below contain MAE applicable to 0.02 mile (105.6 feet) interval.

Alligator Crack Index

$$AC_INDEX = 100 - 40 * [(\%LOW / 35) + (\%MED / 15) + (\%HI / 5)]$$

Where:

The values *%LOW*, *%MED* and *%HI* report the percentage of the observed pavement (0.02 mile, primary lane) that contains alligator cracking within the respective severities. These values range from 0 to 100.

%LOW = Percent of total area (primary lane, 0.02 in length), low severity

%MED = Percent of total area (primary lane, 0.02 in length), medium severity

%HI = Percent of total area (primary lane, 0.02 in length), high severity

Percent of total area is computed as:

$$\frac{\text{square foot area of alligator crack severity}}{0.02 \text{ mile} * \text{lane width}}$$

In AC_INDEX, the denominators 35, 15, and 5 are the Maximum Allowable Extents (MAE) for each severity. In other words, we will allow up to 35% of low severity alligator cracking for a 0.02 interval before failure, 15% for medium severity, and so on. As you can see, if any single severity reaches MAE the resulting index value is 60, or failure.

Longitudinal Crack Index

$$LC_INDEX = 100 - 40 * [(\%LOW / 175) + (\%MED / 75) + (\%HI / 25)]$$

Where:

The values *%LOW*, *%MED*, and *%HI* report the length of longitudinal cracking within each severity as a percent of the section length (0.02 mile, primary lane).

These values are ≥ 0 and can exceed 100.

%LOW = Percent of interval length (primary lane, 0.02 in length), low severity

%MED = Percent of interval length (primary lane, 0.02 in length), medium severity

%HI = Percent of interval length (primary lane, 0.02 in length), high severity

Percent of interval length is computed as:

$$\frac{\text{length of respective longitudinal cracking}}{0.02 \text{ mile (105.6 feet)}}$$

In LC_INDEX, the denominators 175, 75, and 25 are the Maximum Allowable Extents (MAE) for each severity. In other words, we will allow up to 175% of low severity alligator cracking for a 0.02 interval before failure, 75% for medium severity, and so on. As you can see, if any single severity reaches MAE the resulting index value is 60, or failure.

Structural Crack Index

$$SC_INDEX = [100 - ((100 - AC_INDEX) + (100 - LC_INDEX))]$$

Structural Crack Index is a combination of Alligator Cracking and Longitudinal Cracking, and is used in the SCR formula in lieu of AC and LC separately.

Transverse Crack Index

$$TC_INDEX = 100 - 40 * [(LOW / 21.1) + (MED / 4.4) + (HI / 2.6)]$$

Where:

The values *LOW*, *MED* and *HI* report a count of the total number of transverse cracks (reported to three decimals) within each severity level, where one transverse crack is equal to the lane width. These values are ≥ 0 .

LOW = Number of cracks in interval (primary lane, 0.02 in length), low severity

MED = Number of cracks in interval (primary lane, 0.02 in length), medium severity

HI = Number of cracks in interval (primary lane, 0.02 in length), high severity

Number of cracks is computed as:

$$\frac{\text{Total length of transverse cracks}}{\text{Lane width}}$$

In TC_INDEX, the denominators 21.1, 4.4, and 2.6 are the Maximum Allowable Extents (MAE) for each severity. In other words, we will allow up to 21.1 low severity transverse cracks for a 0.02 interval before failure, 4.4 cracks for medium severity, and so on. As you can see, if any single severity reaches MAE the resulting index value is 60, or failure.

Patching Index

$$\text{PATCH_INDEX} = 100 - 40 * (\% \text{PATCHING} / 80)$$

Where:

The value *%PATCHING* reports the percentage of the observed pavement (0.02 mile, primary lane) that contains patching/potholes. This value ranges from 0 to 100.

%PATCHING = Percent of total area (primary lane, 0.02 in length)

Percent of total area is computed as:

$$\frac{\text{square foot area of patching/potholes}}{0.02 \text{ mile} * \text{lane width}}$$

There are no severity levels for patching. It either exists or does not.

In *PATCH_INDEX*, the denominator 80 is the Maximum Allowable Extent (MAE) for each severity. In other words, we will allow up to 80% patching for a 0.02 interval before failure. As you can see, if patching/potholes reaches MAE the resulting index value is 60, or failure.

Rutting Index

$$\text{RUT_INDEX} = 100 - 40 * [(\% \text{LOW} / 535) + (\% \text{MED} / 205) + (\% \text{HI} / 40)]$$

Where:

20 rut depth measurements are taken per 0.02 interval for each of 2 wheel paths (left and right), resulting in a total of 40 measurements taken for both wheel paths. *Each wheelpath is analyzed independently for rut severities.* The values *%LOW*, *%MED* and *%HI* are a *total percentage* of left wheelpath percentage and right wheelpath percentage added together for the respective severity. These values range from 0 to 200.

%LOW = Percent of LOW ruts in left wheelpath based on 20 ruts, plus percent of LOW ruts in right wheelpath based on 20 ruts.

%MED = Percent of MED ruts in left wheelpath based on 20 ruts, plus percent of MED ruts in right wheelpath based on 20 ruts.

%HI = Percent of HI ruts in left wheelpath based on 20 ruts, plus percent of HI ruts in right wheelpath based on 20 ruts.

Percent of rut measurements within each severity can also be computed as:

$$\frac{\text{total number of ruts within each severity in both wheelpaths}}{20} * 100$$

In *RUT_INDEX*, the denominators 535, 205, and 40 are the Maximum Allowable Extents for each severity. In other words, the formula allows up to 535% low severity

ruts for a 0.02 interval before. However, since 200 is the highest measurable percentage allowed, 535% is unattainable and therefore, no amount of LOW severity rutting will cause the RUT_INDEX to fail a road. Similarly, since the MAE for MED severity rutting is 205, no amount of MED severity rutting will cause the RUT_INDEX to reach 60 and fail the road. As you can see, LOW severity rutting reaches MAE the resulting index value is 60, or failure. This formula was intentionally designed to minimize the impact of LOW and MED severity rutting on RUT_INDEX.

Roughness Condition Index (Asphalt)

$$RCI = 32 * [5 * (2.718282 ^ {(-0.0041 * AVG IRI)})]$$

Where:

The value *AVG IRI* reports the average value of the Left IRI and Right IRI measurements for the interval (0.02 mile, primary lane). This value can range from approximately 40 to 999.0.

Average IRI is computed as:

$$\frac{\text{Left wheelpath IRI} + \text{Right wheelpath IRI}}{2}$$

There is no applicable threshold for failure for this index.

Roughness Condition Index (Concrete)

$$RCI = -0.0012(IRI^2) + 0.0499(IRI) + 99.542$$

For concrete, PCR = RCI

Surface Condition Rating Index

SCR = *Lowest* Index Value Of: [SC_INDEX, TC_INDEX, PATCH_INDEX, RUT_INDEX]

Note: The modified SCR equation above combines AC_INDEX and LC_INDEX, and considers that a single AC/LC index value of the Structural Crack Index (SC_INDEX). The lowest of the four computed index values (SC_INDEX, TC_INDEX, PATCH_INDEX, or RUT_INDEX) becomes the SCR.

Where:

See above for determinations of SC_INDEX, TC_INDEX, PATCH_INDEX and RUT_INDEX.

The threshold for failure for this index is SCR = 60.

Data Collection Vehicle Subsystems

Data on paved roads in Cycle 5 is collected by FHWA using a Pathway Services Inc. Data Collection Vehicle (DCV), called PathRunner. The DCV is driven in the primary-direction lane at posted speed limits and less.

CAMERAS

Forward-facing and rear-facing video is collected as .jpg digital imagery at a frequency of 26.4 feet.

Two forward-facing cameras are mounted above the vehicle cab, one pointed straight ahead and the other to the right shoulder providing seamless 120 degree viewing.

| CAMERA SPECIFICATIONS | |
|-------------------------------------|-------------------------------|
| Two Forward/ One Rear Facing | |
| Camera lens/type | FUJINON CCTV LENS H16x10B-Y41 |
| Focal length | 10 mm – 160 mm |
| Image size | 8.8 mm x 6.6mm |
| Image format | *.jpg |
| Image resolution | HD 2000 X 1200 |
| Image pixel size | depends on distance |
| Zoom ratio | 16x |
| Max Relative Aperture | 1:2.5 |
| Iris range | F25-T800 (Equivalent to F800) |

Pavement images are created using a Laser Scan Imaging System. This system is composed of a single high resolution line-scan camera and two lasers configured to image an approximate 11-foot wide lane with 1 mm resolution.

| CAMERA SPECIFICATIONS | |
|------------------------------|-----------------------------------|
| Pavement Line Scan | |
| Image size | 4280 pixels/line |
| Image width | 4 meters (3950 mm nominal) |
| Laser class | 3B |
| Power | 250W |
| Vehicle speed limitations | 62 mph |
| Environment | Dry pavement, day or night |
| Sensor size (approx) | 300 mm(H) x 375 mm(L) x 200 mm(D) |
| Image frame length | 26.4 feet |

DMI (Distance Measuring Instrument)

The DMI (Distance Measuring Instrument) obtains road length measurements that are accurate to 0.1% for speeds up to 60 mph. The DMI is connected to the hub of the rear wheel on the driver's side, and is calibrated to the revolutions of the rear vehicle axle on a regular basis.

ROUGHNESS (IRI)

The collection system includes a South Dakota type laser profiler manufactured based on active Class 1 ASTM E950 standards. The dynamic profile of the pavement surface is collected from which the IRI roughness data is computed. The sensors include one accelerometer on each wheelpath, one height sensor (laser) on each wheelpath, and a distance transducer.

| IRI SPECIFICATIONS | |
|-----------------------------|---|
| Reported IRI units | Inches/mile |
| Vehicle speed limitations | 12-62 mph |
| IRI equipment certification | Texas Transportation Institute (TTI) |
| Wavelengths accommodated | 6 in. – 300 feet |
| IRI computed & reported | World Bank Technical Paper Number 46 |
| Environment | Dry pavement, day or night, above 32 degrees F |
| Adherence to specifications | ASTM E950-98 (2004), ASTM E 1926-08, AASHTO MP 11-08, AASHTO PP 49-08 |

RUTTING

Rutting depths are measured using an INO Laser Rut Measurement System (LRMS). This system is a transverse profiling device that detects and characterizes pavement rutting. The LRMS can acquire full 4 meter width profiles of a pavement lane at normal traffic speeds and uses two laser profilers that digitize transverse sections of the pavement.

| RUTTING SPECIFICATIONS | |
|-------------------------------|--|
| Reported rut depth units | Inches |
| Vehicle speed limitations | Up to 62 mph |
| Sampling rate | 30-150 profiles/second |
| Transverse resolution | 1280 points/profile |
| Transverse field-of-view | 4 m |
| Depth accuracy (nominal) | +/- 1 mm |
| Environment | Dry pavement, day or night, above 32 degrees F |
| Adherence to specifications | ASTM E1703M-95 (reapproved 2005) |

GPS & INERTIAL SYSTEMS

GPS is collected by an onboard system employing OmniSTAR real-time correction and a gyroscope (spin-type) to provide accurate positioning data (pitch/roll/heading) in instances of satellite obstruction. All GPS coordinates are tied to image and linear distance measurements.

| GPS SPECIFICATIONS | |
|---------------------------|-----------------------|
| Static accuracy | Sub-meter |
| Dynamic accuracy | 2-3 meters |
| Receiver | 12 satellite tracking |
| Coordinate system | Lat Lon WGS 84 |
| Environment | Day or night |
| Cross-slope | + - 0.5 degrees |
| Grade | + - 0.5 degrees |

Description of Manual Ratings

Description of Manual Rating Methods

In 2013, the Federal Highway Administration updated existing Manual Rating Procedures in an effort to better align pavement conditions for Manually Rated Routes and Parking with the Highway Pavement Management Application (HPMA). HPMA is the Pavement Management System used by the FHWA to store inventory and condition data from the Road Inventory Program (RIP) and forecast future performance using prediction models. HPMA uses pavement condition data (collected by the Road Inventory Program) to develop life cycles for pavements and recommend treatments to maximize useable pavement life while minimizing costs associated with maintenance and repair.

The Federal Highway Administration (FHWA) developed a set of manual rating methods for pavement that are appropriate for Federal Roadways. Two different methods were developed for linear roads and a separate method was developed for parking areas and nonlinear roads. These methods employ a 0-100 rating scale and improve consistency and objectivity in the manual evaluation of surface distresses. They are compatible with ratings that are collected by the automated Data Collection Vehicle (DCV).

- The first of the two manual evaluation methods for roads uses rating criteria to assign index values to each distress type based on a visual evaluation of severity and extent.
- The second manual evaluation method for roads is very time demanding and is best employed on only a select set of routes which may have the highest visitor use and require a more intensive assessment. This method will be used for the Manual Rating of Function Class 1, 2, 7, and 8 Roads. This method is based on measurements that are recorded for each instance of a surface distress. These measurements are converted into index values using conversion formulas.
- Parking areas and non-linear roads are rated similar to the first method shown above, however, there are some slight differences due to the non-linear nature.

The details and criteria used for each of these rating methods are outlined below.

Visual Inspection Method for Manually Rating Secondary Roads

The visual inspection method for manually rated roads uses condition rating criteria that have been developed by FHWA. This criteria is based on a visual evaluation of the severity and extent of distresses to determine the overall condition of the roadway. This method is used for secondary roads that are Functional Class 3, 4, 5, and 6. This constitutes the majority of manually rated roads collected by the Road Inventory Program.

Rating Section Lengths

For this method, Manually Rated Roads are rated in sections. These sections may be made based on length of changes in surface type or condition as described below. The ratings are then aggregated to give an overall rating for the Route:

- Rating sections should be no longer than .25 miles in order to keep the area being rated manageable.
- A new rating section may be started based on changes in condition, width, or surface type if these changes represent a significant portion of the route (are not isolated instances).
- If the road condition, width, and surface type remain constant then new sections do not need to be created unless the road exceeds .25 miles.

Rating Criteria

For this method, Manually Rated Roads are evaluated using a visual inspection of the six distress types listed below. Each distress is assigned one of five index values. An overall Surface Condition Rating (SCR) and Pavement Condition Rating (PCR) are calculated based on these index values.

- Alligator Cracking
 - Rating based on percentage of road surface affected
- Longitudinal Cracking
 - Rating based on severity level (crack width) and percentage of road section length of longitudinal cracks
- Transverse Cracking
 - Rating based on crack width, crack spacing, and percentage of surface affected
- Patching
 - Rating based on percentage of road surface affected
- Rutting
 - Rating based on percentage of road surface affected
- Roughness
 - Only included if the overall roadway length is greater than 0.5 miles and the posted speed limit is greater than or equal to 25 mph. Subjective rating based on the overall ride comfort of the section.

Concrete Routes also receive a PCR rating based on visual evaluation of the following six distress types.

- Slab Faulting at Joints
- Slab Cracking and breakup
- Surface Delamination and Pop-outs
- Joint Distresses
- Patching

Distress Measurement Method for Manually Rating Primary Roads

A more intensive and time demanding assessment than our standard method was developed for Primary roads that are functional class 1, 2, 7, or 8. These high visitation roads are usually accessible by the automated Data Collection Vehicle but in rare instances may need to be manually rated. The method developed is based on measuring each instance of a distress. These measurements are totaled over each section length being measured and are then converted into index values between 0 and 100 (100 being a road with no distress) using index formula equations outlined below. The goal of this method is to produce measured index values which are directly comparable to the automated Data Collection Vehicle.

Rating Section Lengths

For the distress measurement method roads are broken into sections in order to rate. Distress measurements are totaled for each section separately in order to determine the index value for that particular section. The section length to be rated is determined based on the following rules:

- Rating sections are between 0.25 and 0.50 miles long
- A new rating section is created if there is a significant change in condition or pavement width
- If there are no significant changes in condition or pavement width, rating sections are broken at equal intervals, typically 0.50 miles

Manual Distress Measurements

Alligator Cracking

- Alligator cracking is measured by area (square feet). Instances of Alligator cracking are measured along the length and multiplied by the average width of the distressed area.
- The index for alligator cracking takes the total area of cracking compared to the interval length and converts it to a percentage. That percentage is then input into an index formula that yields a value between 0 and 100 (0 being the most distressed).
- Severity levels are not defined for manually measured Alligator cracks. The Alligator Crack Index formula is calculated based on an assumption of medium severity.

Longitudinal Cracking

- Longitudinal cracking (cracking in the direction parallel to the roadway) is measured by length (ft).
- The index for longitudinal cracking takes the total length of cracking compared to the interval length and converts it to a percentage broken down by severity. That percentage is then input into a formula that yields a value between 0 and 100 (0 being the most distressed).
- Two severity levels are defined for manually measured Longitudinal Cracks. Lower severity cracks are those with a mean width of less than 0.25 inches. Sealed cracks with sealant in good condition are also considered lower severity. Higher severity cracks are those with a mean width of greater than 0.25 inches.

Transverse Cracking

- Transverse cracking (cracking in the direction perpendicular to the roadway) is measured by length (ft).
- The index for transverse cracking takes the total number of cracks (1 crack would encompass the full lane) broken down by severity. The total numbers of each severity are then put into a formula that yields a value between 0 and 100 (0 being the most distressed).

- Two severity levels are defined for manually measured Transverse Cracks. Lower severity cracks are those with a mean width of ≤ 0.25 inches. Sealed cracks with sealant in good condition are also considered lower severity. Higher severity cracks are those with a mean width of > 0.25 inches.

Patching and Potholes

- Patching and Potholes are measured by area (square feet). Instances of Patching are measured along the length and multiplied by the average width of the patch.
- Instances of full lane width patching cannot be longer than 0.100 miles, otherwise it should be considered a pavement change rather than a distress.
- There are no stratified severities for Patching. It is either present or it is not.

Rutting

- Visible rutting is measured by length (feet) in each wheelpath. Rutting needs only to be visible for it to be rated.
- Severity levels are not defined for manually measured rutting.

Roughness

- Roughness is given a subjective rating of Excellent, Good, Fair, or Poor based on the overall riding comfort of the section. Roughness is only included if the overall roadway length is greater than 0.5 miles and the posted speed limit is greater than or equal to 25 mph.

Index Formulas for Distress Measurement Method:

The method used to convert distress measurements into index values is shown below. The Surface Condition Rating and Pavement Condition Rating are calculated based on these index values.

Alligator Crack Index for Manual Rating:

$$AC_INDEX = 100 - 40 * (\%ALLIGATOR / 15)$$

Where:

$\%ALLIGATOR$ = Percent of total area of section being rated that contains Alligator cracking.

Longitudinal Crack Index for Manual Rating:

$$LC_INDEX = 100 - 40 * [(\%LOW / 175) + (\%MED / 75)]$$

Where:

$\%LOW$ = Percent length of longitudinal cracks where crack width ≤ 0.25 inches

$\%HIGH$ = Percent length of longitudinal cracks where crack width > 0.25 inches

Transverse Crack Index for Manual Rating:

$$TC_INDEX = 100 - 40 * [(LOW / 21.1) + (MED / 4.4)]$$

Where:

LOW = Count of the total number of transverse cracks within the section length where one transverse crack is equal to the lane width and the crack width ≤ 0.25 inches

HIGH = Count of the total number of transverse cracks within the section length where one transverse crack is equal to the lane width and the crack width > 0.25 inches

Number of cracks is computed as:

Total length of transverse cracks/Lane width

Patching Index for Manual Rating:

$$\text{PATCH_INDEX} = 100 - 40 * (\% \text{PATCHING} / 80)$$

Where:

%PATCHING = Percentage of pavement section that contains patching/potholes.

Rutting Index for Manual Rating:

$$\text{RUT_INDEX} = 100 - 40 * (\% \text{RUTTING} / 205)$$

Where:

%RUTTING = Percentage length of rutting within the section being measured.

Method for Manually Rating Paved Parking Areas and Non-Linear Roads

Parking areas are evaluated based on a visual inspection using condition rating criteria that has been developed by FHWA. This criteria is based on a visual evaluation of the severity and extent of distresses to determine the overall condition of the parking area. This overall condition rating is linked to the level of repair and rehabilitation practices required.

A distress index is determined for each of the distresses listed below for Asphalt and Concrete Parking areas. The overall Pavement Condition Rating (PCR) of the parking lot is driven by the most severe distress present.

Rating Criteria:

Asphalt Parking Distress Types

- Alligator Cracking
 - Rating based on percentage of road surface affected
- Longitudinal, Transverse and Block cracking
 - Rating based on crack width, crack spacing, and percentage of surface affected
- Rutting and Distortions
 - Rating based on percentage of road surface affected
- Hot Mix Asphalt Patches
 - Rating based on overall percentage of HMA patches
- Potholes and Cold Patches
 - Rating based on percentage of road surface affected
- Surface Raveling and Bleeding
 - Rating based on percentage of road surface affected

Concrete Parking Distress Types

- Slab Faulting at Joints
 - Rating based on height differential between adjacent slabs or pieces of broken slabs
- Slab Cracking and breakup
 - Rating based on quantity of cracks and if slab is acting to able distribute load as designed
- Surface Delamination and Pop-outs
 - Rating based on percentage of road surface affected to include pop-outs, spalls and surface delamination
- Joint Distresses
 - Rating based on sealant condition and concrete distresses at/or adjacent to joints
- Patching
 - Rating based on percentage of road surface affected

Curb Inspection and Treatments

During inspections of manually rated parking lots and routes, the curb reveal and overall curb condition are evaluated. The curb condition is used to determine a recommendation.

Curb Reveal

The vertical distance on the curb face from the gutter flow line or pavement surface to the top of curb. When resurfacing adjacent to curb, the resulting curb reveal should be no less than 4 inches. Additionally, when resurfacing adjacent to a gutter, the resulting pavement surface should be flush with the gutter pan. In cases where a resurfacing would violate either of these parameters, the surface may need to be milled or removed to adjust to these field conditions.

Curb Recommendations

The following treatment categories are based on the overall percentage of distresses along the entire curb structure for a specific pavement structure. Distresses include spalling, cracking, loss of material and any other damage which prevents the curb from conveying storm runoff or failing to perform in its intended function.

- Overall curb damage ranging 0%-5%:
 - DO NOTHING
- Overall curb damage ranging 5%-20%
 - LIGHT REPAIR
- Overall curb damage ranging 20%-50%
 - MODERATE REPAIR
- Overall curb damage greater than 50%:
 - REPLACE

GPS on Manually Rated Roads (MRR)

Parking areas, some roads, and other paved areas that are not fully drivable with the Data Collection Vehicle are collected manually by field technicians. GPS is collected for these routes using portable Trimble GPS backpack units. Paved campground pads and driveways are not typically included in the inventory or GPS.

Geodatabase – Background and Metadata

In addition to this park report, a geodatabase containing both tabular and spatial data specific to this park has been provided. All data disseminated in the preceding report has been obtained from the tables and fields within said geodatabase. The geodatabase can be referenced for tabular data via Microsoft Access or for both tabular and spatial data via ESRI's ArcGIS Suite of software which consists of; ArcMap, ArcCatalog and ArcExplorer. Consolidating the RIP data into one database creates a seamless relationship of tabular and geographic data. It will allow RIP to facilitate easier updates and enhancements in the future. A geodatabase can be thought of as simply a database containing spatial data. Many different tables are contained within the park's geodatabase. A complete and thorough description of the tables and fields contained within this geodatabase can be found in the metadata. The metadata is attached directly within the geodatabase and can be accessed via ESRI's ArcCatalog. The metadata portion of the geodatabase also includes data dictionary report functionality that formats the metadata into an easy to read report.

Glossary of Terms and Abbreviations

| TERM OR ABBREVIATION | DESCRIPTION OR DEFINITION |
|-----------------------------|--|
| AC | Alligator Cracking |
| CRS | Condition Rating Sheets (Section 5) |
| Curb Recommendation | Curb remediation based on overall percentage of curb distress |
| Curb Reveal | Height of curb exposed from gutter flow line to top of curb |
| DCV | Data Collection Vehicle |
| Excellent | Excellent rating with an index value of 95 to 100 |
| Fair | Fair rating with an index value from 61 to 84 |
| FUNCT_CLASS | Functional Classification (see Route ID, Section 2) |
| Good | Good rating with an index value from 85 to 94 |
| IRI | International Roughness Index |
| HPMA | Highway Pavement Management Application |
| Lane Width | Width from road centerline to fogline, or from centerline to edge-of-pavement when no fogline exists |
| LC | Longitudinal Cracking |
| MRR | Manually Rated Route |
| MRL | Manually Rated Line |
| MRP | Manually Rated Polygon |
| N/A | Not Applicable |
| NC | Not Collected |
| PATCH | Patching and Potholes |
| Paved Width | Width from edge-of-pavement to edge-of-pavement |
| PCR | Pavement Condition Rating |
| PKG | Parking Area |
| Poor | Poor rating with an index value of 0 to 60 |
| RCI | Roughness Condition Index |
| SC | Structural Cracking |
| SCR | Surface Condition Rating |
| TC | Transverse Cracking |